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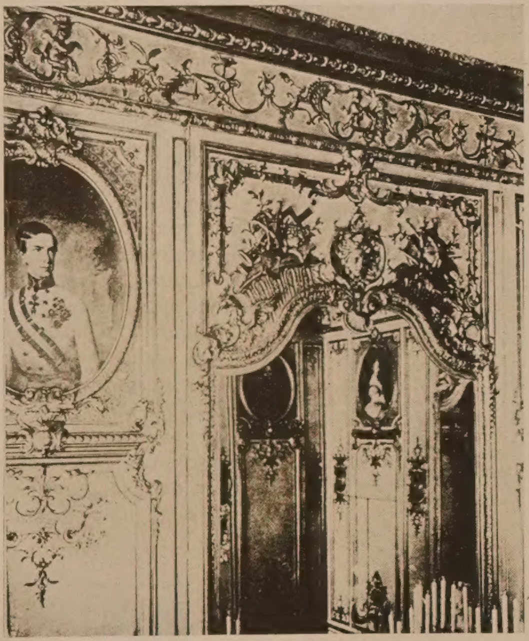
A Master Designer of the Time of Louis XV, Nicolas Pineau

By Henry Coleman May

AFTER the masters of the Gothic era, there are in the history of architecture and decorative art none who have displayed a more fanciful and exquisite imagination than those artists of the eighteenth century, than those masters of interior decoration who flourished during the reign of Louis XV of France.

It is true that the draftsmen and artisans of fifteenth and sixteenth century Italy treated their rediscovered classic motifs with singular charm and originality. They translated antique forms into friezes and decorations which sought to be Greek or Roman but which, under the very personal touch of their creators, took on at once a wholly different aspect, a more gracile and voluptuous distinction than that which marked their severer and nobler prototypes. The copyists of the Renaissance were gifted with too much genius to merely copy. The original air was transposed by them, and masked by numerous variations. They transfused a new and genial essence, made of more delicate perceptions, into the antique designs which had served as their models.


I. Detail from the "Salle du Conseil" in the Palace of the Élysée. Nicolas Pineau.

Although full of a very vivid and distinctive originality, the art of the Renaissance was nevertheless, as its name denotes, a return to an already completely developed school. The absolutely distinct originality of the great Gothic days had passed. Those years of passionate Christian fervor when lace-like spires, aerial buttresses, and innumerable sculptured saints had been created with infinite patience and almost endless labor had closed. Those magical walled spaces, lighted through myriad-colored glass of almost incredible beauty, were all but forgotten as the pale columns of Roman temples arose from the astonished earth, and the marble limbs of Grecian goddesses were drawn forth from their deep hiding-places.

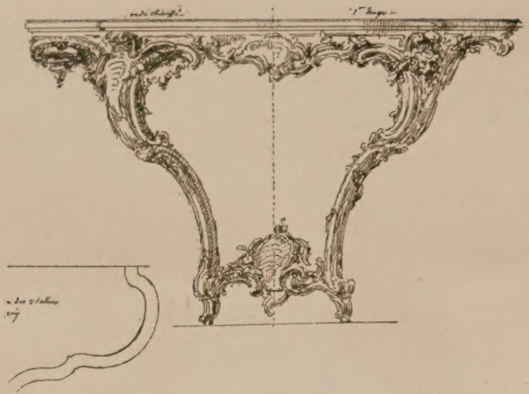
Classicism returned once more to its forgotten throne. The Greek orders, never again to be lost, had for all time come into their own.

Nevertheless, moments of reaction occurred punctuating, though never really interrupting, the sway of these rediscovered precepts. The seventeenth century, at a given moment, had almost obscured its classic constructions with a covering of baroque ornamentation, a disguise which at times nearly veiled its basic principles. In the succeeding century there followed another moment of rebellion against Greek forms, this time, though shorter in duration, more complete and successful than the attempt of earlier years. The change became apparent in the first decade of the eighteenth century when the popular taste began to demand and finally to insist on a new freedom of line, or curious graceful inequalities and amusing contradictions. This eccentric spirit led, of course, to innumerable exaggerations; to creations which sometimes even passed the boundaries of good taste.

The architects and minor draftsmen of the time of Louis XV had, many of them, become too deeply steeped in the redundance of Italian baroque decoration. Meissonier, that erratic genius, seemed to see all the world as a huge rococo composition, some vast exotic garden splendidly distorted by his rioting inventions. Oppenort, almost equally gifted though far saner, had returned to France with ineffaceable memories of Venetian splendors.

There were many others, however, who in that period of extremes managed to retain the essentially French taste for repression combined with that "verve" and "esprit" which can be found in no other country.

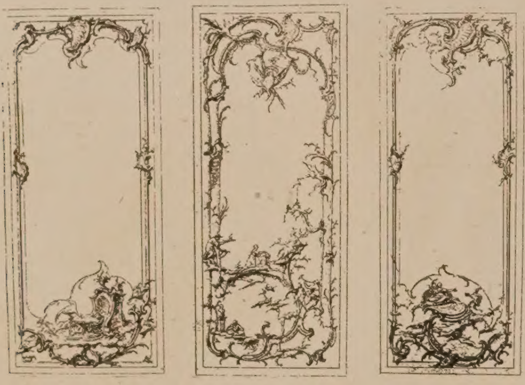
Foremost among these followers of a new phase of art was Nicolas Pineau, a designer who kept to a very marked degree an unshakable sense of line and proportion even in the most free and fanciful of his compositions. It is impossible to glance at his designs without at once realizing this fact. His drawings exemplify to its highest point the very best taste of the Rocaille School. No designs could more clearly convey to one the harmonious atmosphere of



II. Design for a console. Nicolas Pineau.

a cultivated and luxurious age, an age in which splendor had become tamed and had been brought up to its most affined possibilities. In Pineau's compositions we find all the originality of the Rocaille School tempered with an innate lightness of touch and a spontaneous sense of values.

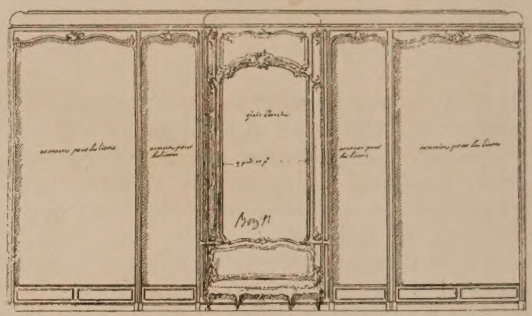
Born in Paris in 1684, Nicolas Pineau was one of the most gifted artisans of the early years of the reign of Louis XV. In the first flush of his popularity he was sent for by Peter the Great, who commissioned him to design and supervise the building of the palaces at Peterhof, and of a summer residence on one of the islands in the neighborhood of Petrograd, now, unfortunately, no longer existing. He remained in Russia for eleven years, during this time making innumerable drawings not only for the imperial family but also for many members of the Russian nobility. His versatility and invention seem to have been endless, and his range of subject of the most varied description. Exteriors and interiors, both civil and religious, with every imaginable appurtenance and detail fully described, appear in his portfolios. Balconies, lamps, fountains, tombstones, consoles, cartouches, "porte-cochères," to say nothing of chimneypieces and complete designs for every kind of room and apartment. And with what spontaneity these designs are sketched; how facile and light is Pineau's pencil, how unerring his taste and how accurate his eye!



III. Three designs for sculptured and gilded wall panels. Nicolas Pineau.

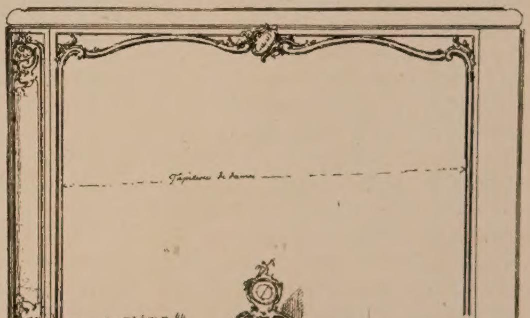
It is true that one can hardly keep from smiling as one looks at his projects for churches, for altars and sacristies. These would seem to be merely backgrounds for the "abbés-galants" of the day; graceful travesties which are too charming to be considered sacrilegious, and which might find their place as scenery for an act of "Manon." These things are the fault of the epoch, hardly of the artist. Religion had almost arrived at the point of having to follow the fashion of the day before humanity, in the terrors of the Revolution, turned its eyes in repentance and awakening once more toward God.

The industrial arts of the time of Louis XV are oftentimes, outside of the land of their origin, recognized principally by their worst examples. To the average person the terms "rocaille" and "Louis-Quinze" are almost synonymous for excess of line and extravagance of ornament. To the connoisseur there is hardly another period comparable with the one in question in charm and artistic interest, in so far as its industrial and minor arts are concerned. In what other epoch could one find compositions more harmonious, more wholly pleasing than those of Nicolas Pineau! How easily, on glancing at his designs for wall panellings, one can imagine the spirited decorations of Pillement or Huet framed within those slightly waving mouldings; how well one can fancy the overdoors and "trumeaux" of a Boucher bordered by those arabesques and gently undulating lines! His chimneypieces seem to be waiting for a terra-cotta group by Marin, a marble of Falconnet, or a bust of some fragile court beauty by Pajou.



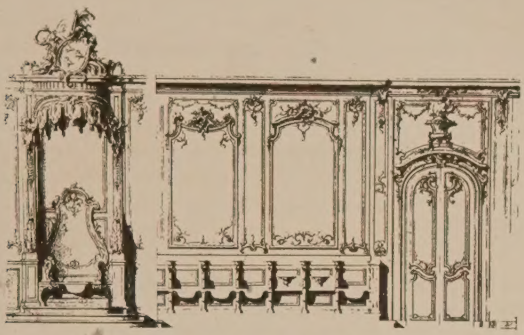
IV. Design for a library. Nicolas Pineau.

The too severe may perhaps characterize this entire style as futile and frivolous, but there is no real reason why these interiors should not be both of these things if one can ever consider consummate art futile. Such condemnation ceases to be criticism. In dealing with the epoch in ques-



V. Design for a library. Nicolas Pineau.

tion one may not be far from the truth in arriving at the conclusion that so-called frivolity is oftentimes but another name for a philosophy and a courage that are not to be despised. The eighteenth century had very little hypocrisy regarding its point of view, its moral attitude. La Rochefoucauld said truly that hypocrisy is the homage that vice renders to virtue. This being the case, one can but conclude that the eighteenth century, frivolous, though not unthinking, above all pleasure-loving, was surely not a vicious age. It was primarily an era of good taste, and vice is rarely found within these bounds. A taste expressed is obviously the most tangible manifestation of one's way of thinking and feeling. Consequently, as one looks at the heirlooms of a departed generation one is forced to conclude that, after all, the much maligned society of the time of Louis XV was possessed of delicate sensibilities and an agreeable soul. If it did not sin as much as a former period its sins at least were infinitely more charming.


VI. Designs for church stalls and for archbishop's chair. Nicolas Pineau.

The consideration of these characteristics cannot but help one to properly appreciate the background against which moved the society of the time, polished and subtle, avid of impressions and sensations.

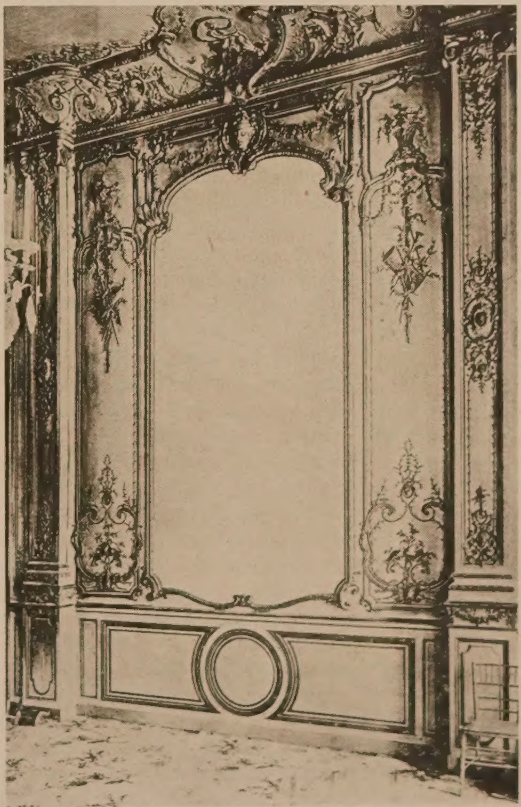
One cannot help feeling in all the art of the time of Louis XV the temper of the epoch. Pineau's interiors were composed in a spirit similar to that in which Fragonard conceived and executed his masterpiece, "L'Escarpolette." Here we have the same voluptuous sense of movement, the same occult balance in composition, the same freedom and perfection of taste of which the century of Watteau was alone capable of bringing to so fine a blossoming. How descriptive of the ethics of this period is the word-picture of her husband which the grandmother of George Sand gave to the authoress: "Your grandfather," she said, "was handsome, elegant, carefully attired, delicate, perfumed, active, lovable, tender, brave, and joyful until his death. In his time there seemed to be no repulsive bodily pain: one preferred to die at a ball or in the theatre rather than in one's bed among four wax-tapers and depressing, ugly people robed in black. We enjoyed life, and when the time came to leave it no one sought to deprive others of their pleasure in it. Indeed, the last farewell of my husband consisted in his bidding me to survive him long and to amuse myself."

Amuse themselves they most decidedly did. It must have been a joy in itself to be able to go from house to house, from château to château, in which everything was designed to please the eye; to live in the midst of surroundings in which the arts blossomed so splendidly. Many of the Parisian hotels owed their charm to the genius of Nicolas Pineau. A contemporary, speaking of the Hôtel de Mazarin, now demolished, which stood in the rue de Varenne, said: "Pineau is an artist to whom we shall always owe a debt of gratitude and of infinite admiration. The interior of the hotel of the Duchesse de Mazarin is the most agreeable which it is possible to imagine. In composition, in the elegance of the ornaments therein, it has never been surpassed, and its gayety and lightness is everywhere repeated and multiplied by the magic of mirrors."

Besides this particular house our artist was responsible for numerous decorations and details to be seen in the hotels Roquelaure and de Villeroi, in those of the Dukes of Luxembourg, Chatillon, and d'Harcourt, and of the Maréchal de Villars. He collaborated with Blondel in the building and decoration of the Hôtel de Rouillé. He designed the famous gallery in the château at Suresnes belonging to Louis de Montmorency, Prince d'Isenghien, and he elaborated another residence in the environs of Paris, at Asnières, for the Marquis le Voyer d'Argenson. He is supposed to have worked in the celebrated Hôtel de Conti, and the wall-panels in the "Salle du Conseil" in the Palace of the Elysée have been attributed to him.

Most of these houses and their decorations have, alas, disappeared. Time has spared but few of the works of Pineau, and were it not for the fact that his original drawings have been preserved with such remarkable and religious care, very little would have come down to us descriptive of his manner.

Even in Russia, where for eleven whole years he worked unceasingly, there is little left that is undeniably his. Of his work at Peterhof there are but few surviving traces. The panels in the Emperor's study are after his designs, as well as the consoles in the lacquered salon within the same


VII. Detail of a room from the Château de Bercy in the style of Nicolas Pineau.

palace. The extensive decorations which he planned by order of Peter the Great have all been destroyed, or were changed beyond recognition to meet the more exuberant taste of the Empress Catherine.

Nicolas Pineau died in Paris in 1754. He was succeeded by his son Dominique, with whom he had collaborated for many years before his death. There is little comparison between the talent of the two men. The son was not gifted with that spontaneity and facility so characteristic of the elder man's work. Dominique, during the remainder of his days, continued to design numerous interiors and their accessories. His compositions were popular and always in demand. His style was pronouncedly that of Louis XVI, and similar in conception to that of the celebrated architect Neufforge, under whose influence the son of Nicolas Pineau most probably fell.

Common Sense Applied to Concrete

By David B. Emerson

MUCH has been written on the subject of concrete, both pro and con. The cement companies have flooded the country with literature, holding up concrete to the public as the only material to be used for everything. Other interests have, on the other hand, circulated quite a little literature condemning concrete more or less heartily. One short-lived magazine was published in Chicago a few years ago in the interest of the burnt-clay products, whose only mission seemed to be to record the failure and collapse of concrete buildings.

Now between these two extremes there must be some logical middle ground, a common-sense basis for judging between the real worth of concrete and its fictitious and inflated value. In its proper sphere concrete is a most excellent material, and for many uses absolutely indispensable, and has no efficient substitute, and probably never will have. The great trouble is that it has been largely exploited as a panacea for all building ills, and, in consequence, it has been used unwisely and injudiciously, even going so far as to build concrete ships, which, if they were not a total failure, were a long way from being a howling success.

One of the greatest reasons for the popularity of the reinforced-concrete frame for buildings has been that it was so much cheaper than structural steel frames; in fact, almost the only claim made by conscientious engineers in favor of reinforced concrete over structural steel has been that concrete was so much cheaper, and the South and the West fell very hard for that claim.

Now the point is, is concrete so much cheaper after all? Where labor is very cheap the first cost is less, but when one figures up the speed with which a steel-framed building can be erected, and the greater length of time which is taken in erecting a concrete building, is it cheaper? Steel may be fabricated while the site is being cleared and the excavation is being done, so that when the footings are in the erection of the frame can be started at once. Whereas, on the other hand, with a concrete structure the forms cannot be set until the excavation is complete, so that the frame has to progress slowly, and on account of the great amount of form work which is in the way the brickwork cannot be laid up as quickly as with a steel frame. Considering these points, it is very easy to see that a steel-framed building can be completed from four to six weeks earlier than if the same building had been built with a concrete frame. By finishing a month or six weeks earlier, the owner has that much extra rental, which on a moderate-sized ten or twelve story office-building would probably amount to from eight to ten thousand dollars, which would go quite a distance toward offsetting any difference there might be between the cost of reinforced concrete and structural steel.

One of the most serious objections to reinforced-concrete frames in tall buildings is the enormous size of the columns in lower stories, which cuts down the available floor space not a little. The writer has actually seen concrete columns in the basement of a fourteen-story hotel which, after being incased with four inches of brickwork for decorative purposes, were 42 inches square, with an area of 12¼ square feet. The equivalent of this column in structural steel would have been a 14-inch Bethlehem H section, with 16 x 1¼-inch cover plates. After properly incasing the column with fireproofing, allowing a ¾-inch air-space between the steel and the fireproofing, and then incasing the column with four inches of decorative brickwork, it would have made a column 30 inches square, with an area of 6¼ square feet. This would make quite an addition to the available floor space in a rathskeller, where each additional table in busy times would mean extra money for the proprietors of the hotel.

Figure I shows the column as it was built, and Figure II shows the column as it could have been built if steel had been used instead of reinforced concrete.

By looking at Figure II it can readily be seen that there is a large open space between the flanges of the steel column in which pipes and conduit may be run, whereas with concrete-framed building it is always a serious problem where to run concealed pipes, as every one who has ever had anything to do with the designing of concrete-framed structures very well knows.

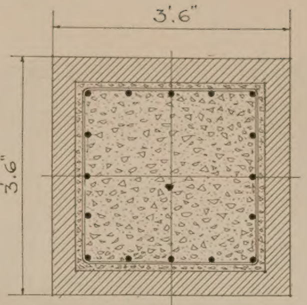
As another illustration of the waste room which results from the use of concrete columns, Figure III shows a wall column in a building which was recently erected in which there was a clear span of 38 feet between the walls. Figure IV shows the size of the column which would have been required had the same building been built with a steel frame instead of reinforced concrete.

Another and more serious objection to concrete frames in office-buildings, hotels, and similar buildings, and in the writer's opinion a most serious one, is the inability to get good and sufficient anchorage for projecting belt-courses and cornices. This can be readily seen by comparing Figures V and VI. Figure V shows a belt-course using a concrete frame, and Figure VI shows the same belt-course using a steel frame. The reader may readily see how much better the anchorage is using the steel frame than it is where the concrete frame is used.

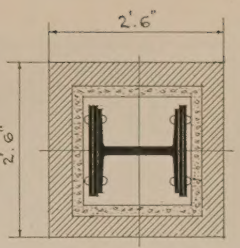
Perhaps one of the most senseless of all the misuses to which concrete has ever been put is the building of trusses of reinforced concrete, using concrete for both tension and compression members. This can only be considered as a stunt, after all, and could have been done far better and easier with structural-steel shapes. All engineers who have worked much in reinforced-concrete design, when pinned down to facts, acknowledge that in all such work they add a large amount of extra steel to make up for any possible failure on the part of the concrete. Still, with all the misuse of concrete, as stated earlier in this article, there are many places where it is invaluable and the very best material known, and in these places it should be used in preference to any other structural material. The concrete pile cast in place is as near to perfection as we are likely to get. Its life is practically eternal, and in most cases, on account of the fact that, unlike wood piles, which must be kept always submerged in water, it is very economical because of the great saving in footings.

Of course it is needless to say that concrete is far and away the best material for footings for walls, piers, and columns. For certain structural uses reinforced concrete is far ahead of any other material, as in the construction of factory and warehouse buildings, built for purely utilitarian purposes, such as Ferguson in the introductory chapter of his "History of Architecture" classed as merely building, or as engineering, and not architecture. Buildings which are not carried so high as to make the columns unnecessarily large, and where the walls are carried frankly on the frame, and no attempt at decoration or concealment of the construction is made, are most ideal types for reinforced-concrete construction.

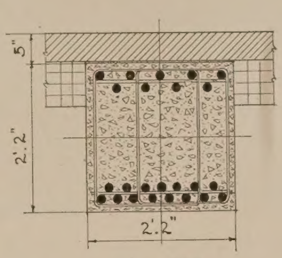
A building like that shown in Figure VI is an excellent example of the truthful and proper use of concrete, and the more of that class of buildings that are built the better. They reduce the fire hazard in industrial communities immensely, and also if a fire should get started in one section of a town, such buildings form a barrier and stop its spread. The first cost of such buildings is naturally somewhat higher than slow-burning or mill construction, but when one considers the saving in insurance rates and the difference in deterioration, they are cheaper in the long run, and the American public is slowly but surely waking up to the fact that it does not pay to burn up buildings at the rate at which it has been done in the past.



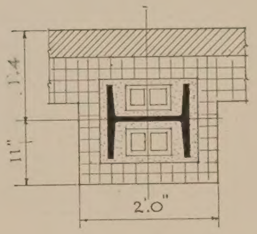
·Fig·I·



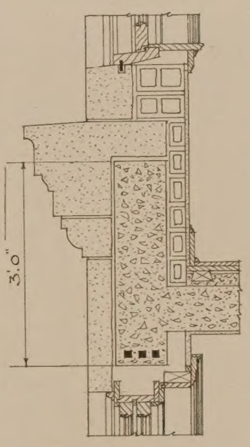
·Fig·II·



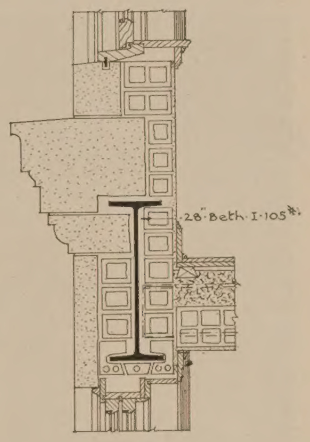
·Fig·III·



·Fig·IV·



·Fig·V·



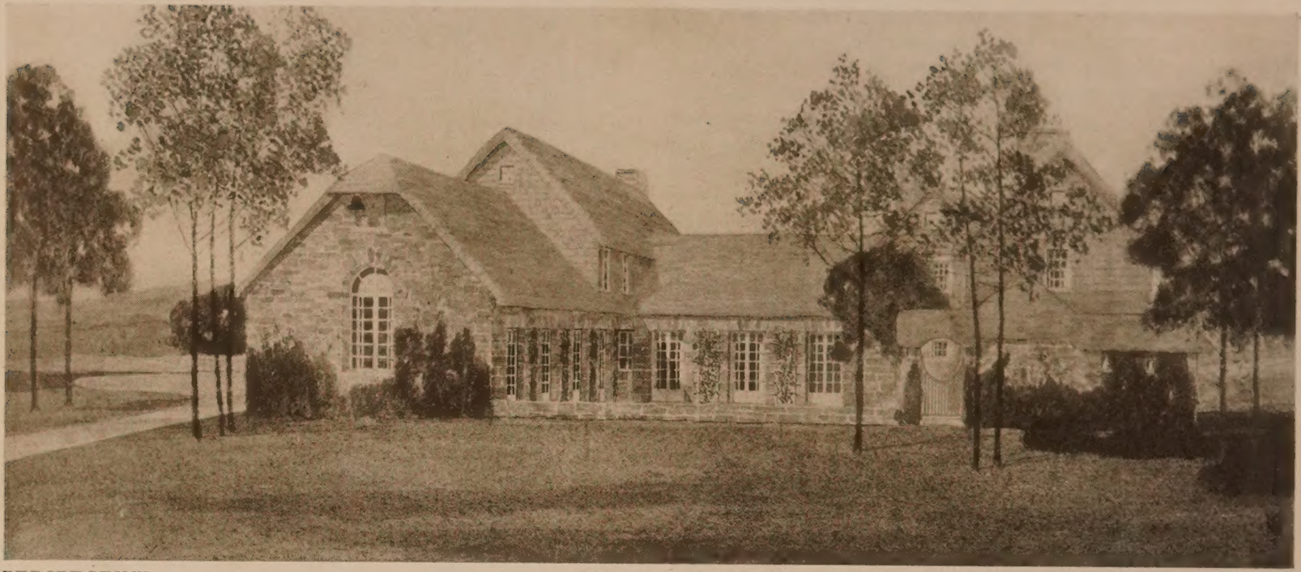
·Fig·VI·

The Therapeutic Value of Color

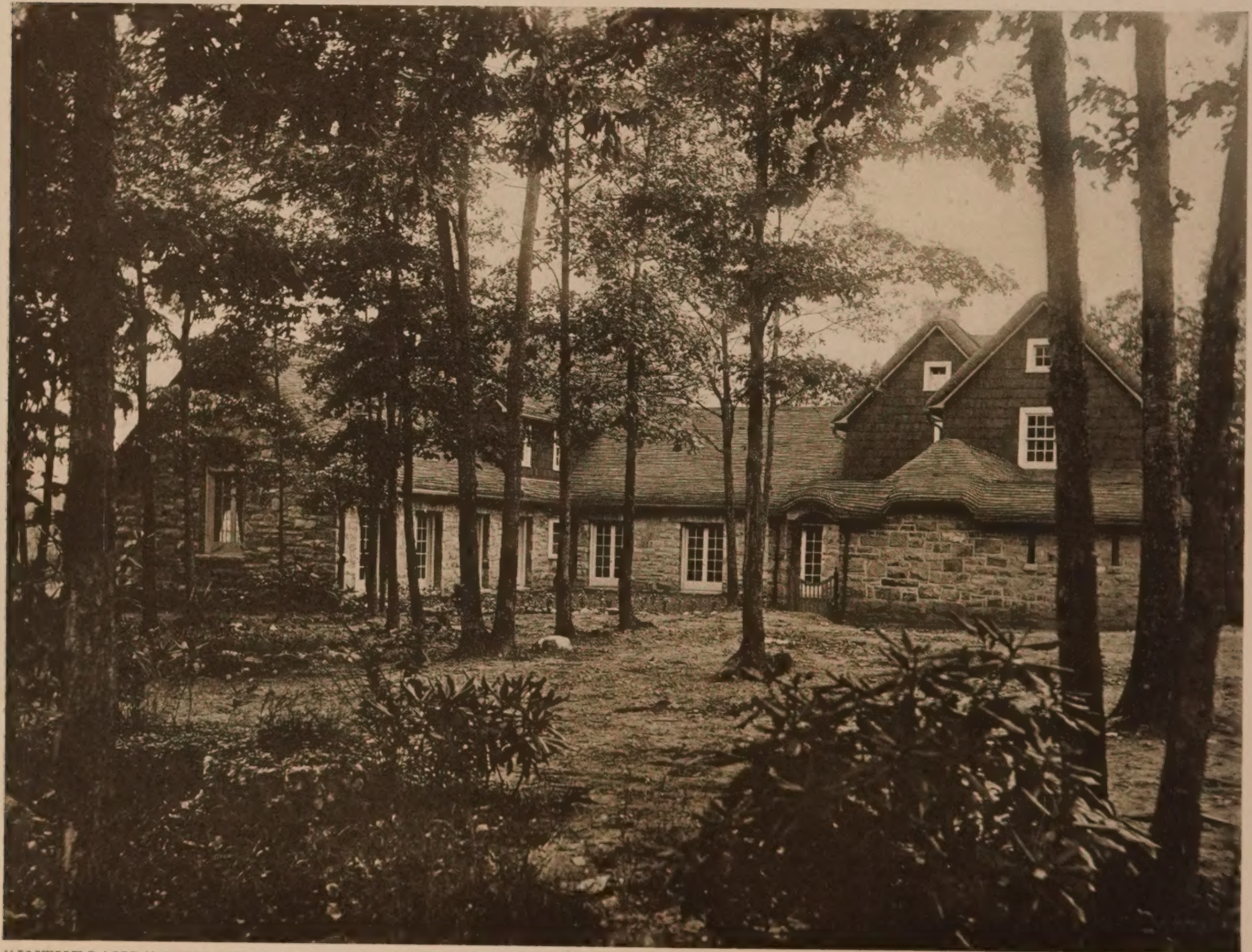
By William O. Ludlow, of Ludlow and Peabody, Architects

COLOR has a much greater therapeutic value than commonly supposed. High keys and violent contrasts have by experiment been shown to excite the sensory nerves to a degree causing actual distress. Note how sparingly Nature uses red and orange; even the glories of the sunset are allowed to last but a few moments; and the red flower in the fields is exceptional. Were it not that as much light as possible must be conserved in our rooms, green—Nature's predominating, most endurable and most restful color—would be ideal. But, as light is admitted through a comparatively small opening, it is necessary to preserve its quantity by reflection from walls and ceilings of light tones. White is too extreme. The sunlight tones of cream, buff, and yellow should always be used in rooms of north exposure, and French grays, or light Nile green, where direct sunlight is more abundant. Blue is a depressing color when in large surfaces; and pink, which verges toward the red tones, should be used sparingly.

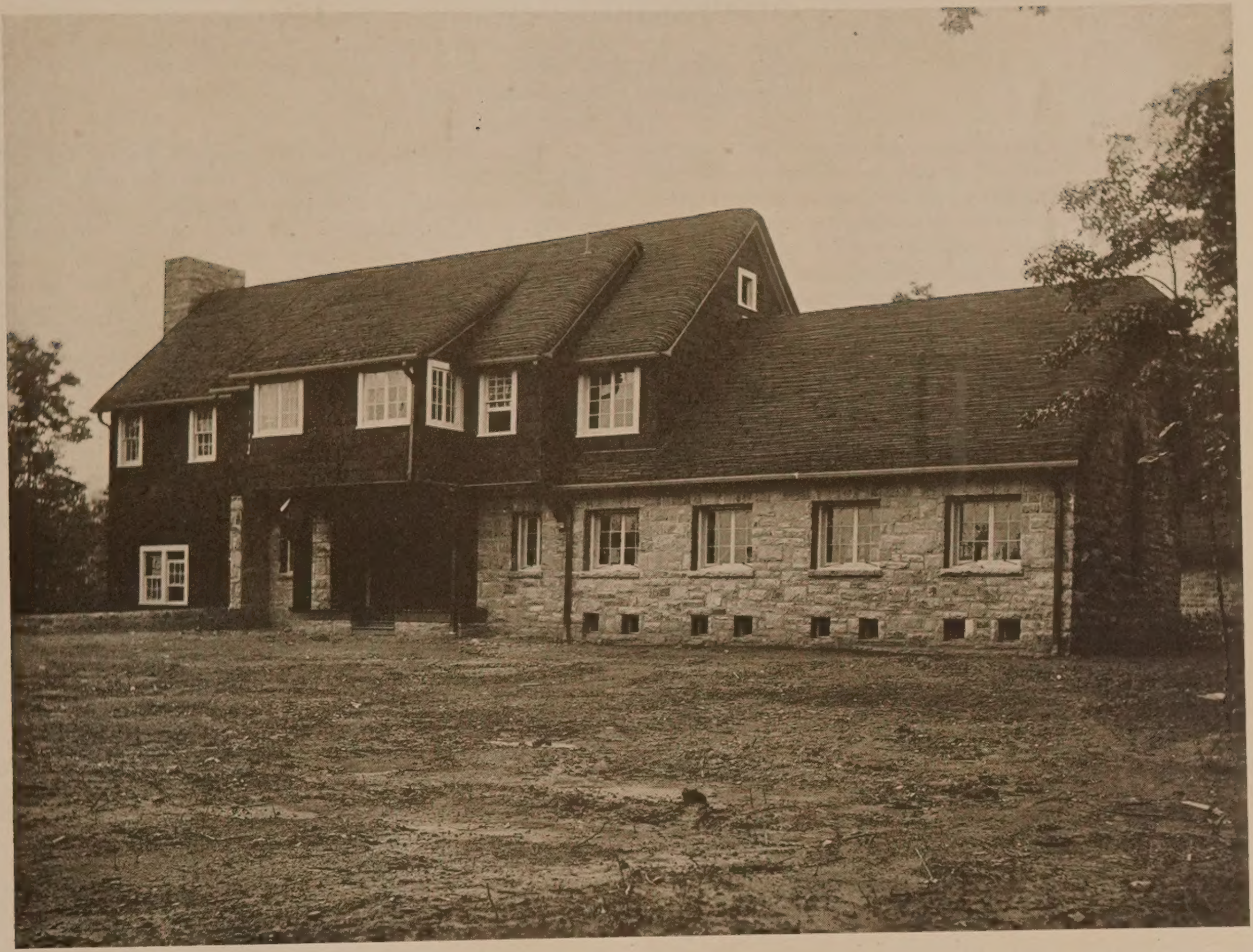
The high tones can and should be used in wall and furniture stencil decorations, furniture coverings, and window-curtains, just as Nature gives cheer to man by fields dotted with flowers—yellow, blue, and occasionally red.

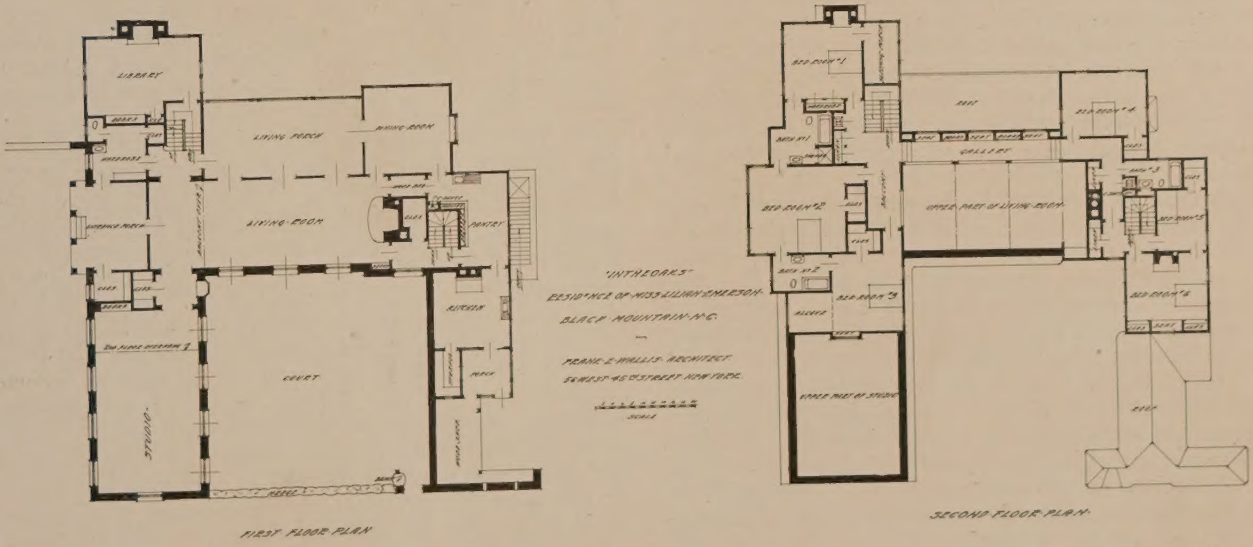


PERSPECTIVE.



"INTHEOAKS," MISS LILIAN EMERSON, BLACK MOUNTAIN, N. C. Frank E. Wallis, Architect.





"INTHEOAKS," MISS LILIAN EMERSON, BLACK MOUNTAIN, N. C.

Frank E. Wallis, Architect.

The Study of the Human Figure in Its Relation to Architectural Design

By David Varon

Architecte diplome par le Gouvernement Français

OF late years scholars have earnestly exerted their ingenuity to discover new sources of inspiration for the study of art. Among other such innovators, the late Binet, a French architect, resorted to nothing less than the microscopic study of aquatic animalculæ. He applied his observations to the design of new forms and condensed the results of his remarkable researches in a splendid book.

What Binet did on the eve of the International Exposition at Paris in 1900, for which he designed the monumental entrance, Viollet-le-Duc had done some years before when he contended in his famous Dictionary that mediæval sculptors drew inspiration from close observation of the local minute flora. It was a hint to modern artists.

Viollet-le-Duc and Binet differ only in method. Their ideas are identical: the study of Nature.

But long before either of these hinted at or actually undertook the study of elemental forms of life, men knew—or instinctively guessed—that the foremost study is that of man himself. Philosophers pursued that absorbing study to find the place of man in the universe, and artists considered it the most important factor in art—not only in sculpture but also in architecture.

The world has evolved since the Egyptian era. Many old ideas have been submerged by the surging of new ones; but in the long run the old is restored to its proper place, with renewed tenacity, confirming the word of Ecclesiastes: "There is nothing new under the sun."

We are struck when observing the movements of ideas and events with the close analogy between several phenomena of different character. For examples: Succession of seasons, ebb and flow, progress and retrogression, etc., . . . all these have one thing in common, oscillation. Just like the pendulum, which swings now to the right and now to the left, so it seems to be with the trend of ideas. When the ascending period of a movement has reached its limits, then begins its decline, and reaction sets in.

Nothing is more interesting and illuminative in this respect than to watch what takes place in Paris, this centre of modern culture. After a short period of mad craving for "Art Nouveau," there comes again into its own the reign of the classic, with its Louis XIV style as a protest, so to speak. Gothic architecture, once decried as expressing a barbaric period, again rises in the esteem of our contemporaries.

This can be accounted for by considering that in each of the various Louis styles, or in the Gothic style, there is something more than a mere fad; there is something permanent, and future mankind may revert to the study of these architectures even long after they will have passed out of use, as we do with the Egyptian and Assyrian, because eternal principles are involved in them.

This is also why, after the prevalence of microscopic research and other novel studies—some of them quite odd—in connection with decoration, it is not astonishing that man should again study himself as a source of artistic inspiration.

Fitness of form to function, proportion, character, etc., . . . where can these be observed with greater advantage than in man, woman, or child?

We are indebted to the great painters for the brilliant demonstration which they made of these principles in their immortal masterpieces. Compare the men with the women in any of the paintings of the series of the "Marie de Médicis," for instance. Line, mass, and color all assert man's strength and reveal woman's grace. When admiring these masterpieces the thought occurs that, owing to the ancient Greek morals, the Greek architects could not but have been greatly inspired by the proportions and beautiful lines of man.

The study of man as a basis of a system in Art found its deserved place during the eighteenth century; but its sponsors went to almost grotesque extremes. Thus we see, for instance, Blondel indulging in a fanciful demonstration that the profile of a cornice coincides with that of a man.

When we claim to-day that much may be learned from the observation of animals, and particularly of man, we have in mind no cartoons or caricatures, but solid principles. Most scholars admit the necessity of studying the law of creation from many standpoints. Yet how little is this necessity understood by the great majority of those taking architecture as a profession.

It has taken mankind countless centuries, from the time when the cave drawings were made down to the founding of the Ecole des Beaux Arts, to organize the study of nature, and particularly of art, and it is not until the Renaissance that we find artists dissecting cadavers to study anatomy. The study of the human figure has become a subject of importance in all schools of art, and naturally in schools of architecture. The trouble is, as with other good studies, that people fail to realize its importance. How many students see the necessity of such a branch of study in connection with house-building? Are they not at school to learn construction, and nothing else, so as to enter very soon into active practice and make money? What is the use of wasting time in drawing from the nude? "Man as a subject of study," thinks the student, "would be interesting from a psychological standpoint as a prospective client." (And most students nowadays think very earnestly that this is the most important part of the profession, and therefore indulge heartily in social activities at college.) "This is all nonsense. We no longer live in the Stone Age, when man could learn to build by watching the beaver. Thank God we are pretty well advanced in the art of building. Let those who study aeronautics inspire themselves from the bird as much as they want. It is all right; but we fail to see the connection between the study of the nude and architectural design. We agree that there may be beautiful lines with which it is good to become familiar; but that is all. Better to devote the same amount of time to strength of materials, or to specifications." Such indeed is the average student's reasoning. It is a pity to see young men shunning the best part of their studies. I do not deny the importance of technics—of all that goes to make the practical side of architecture. But it is incontrovertible that among the problems that the architect has to solve, adherence to æsthetic principles is one of the most important.

Architecture, by its very definition, consists in building in conformity with the laws of mechanics and æsthetics. Far from denying the value of the practical side, I believe that from the great diversity of modern needs a modern style of architecture will be evolved. But it is regrettable that so many fail to understand the purpose of the study of the human figure in connection with our art.

We are all of us great admirers of the Greek school of architecture. In fact, we are dominated by the Hellenic idea in whatever pertains to art, and naturally enough, for in Greece sculpture arose to its height and modern architecture had its birth.

The spirit of analysis led the Greeks to sift through every human thing, every thought. And the rationalism which they applied to their philosophic inquiries they also applied to their art. Seeking the secret of beauty in the human body, they soon evolved the theory that, Nature aiming at making everything beautiful which is healthy, the most beautiful human being must be the healthiest one. As they also understood the relation between the parts of the body, their system of gymnastics never made one limb or part of the body grow to the detriment of another, but developed all parts harmoniously. They were first to understand the specific importance of each organ corresponding to its function, and that is why their architecture, and particularly the Doric order, has so much expression. It is, indeed, a wonder of eloquent simplicity.

With them, proportion took all its importance in architecture. The modern critics who so strongly attack the so-called classic architecture are the remote disciples of the Greek school. To grasp the spirit of this school just compare a Hindu composition of architecture to the Parthenon, the intricate details of a mere column in a rock-hewn temple to the grand simplicity of a Doric column. The one speaks to a public whose minds are peopled with a multitude of legends, while the other is addressing cultured minds. Mankind at that stage felt self-possessed, and to express beauty no longer needed to copy Nature's forms, as the Egyptians did in most of their structures, to convey to the mind ideas of grace or strength. Strength, grace, and richness are successfully expressed in the Greek art by mere proportions. It is said that the Doric column tries to express the proportions of a man, while the Ionic interprets those of a woman. This is another way to say that the Doric order represents strength, while the Ionic represents, and how well, grace. If we admit the Greek point of view that our buildings must not be mere agglomerations of more or less decorated elements meant to attract the vulgar, but aim at expressing beautifully our aspirations, then each element ought to fulfil its purpose beautifully. Plato, to quote the late Guadet, said: "Beauty is the splendor of truth." Instead, we see columns and arches, wreaths and garlands, indiscriminately distributed on any design, as if they had been splashed on at random, for the sole purpose of satisfying the common craving for architectural forms. One might say: "And why not? Should not the artist abide by the law of supply and demand? If the public want it, why not give it to them?" It sounds reasonable, but let us not forget that the public is growing more and more enlightened, that ere long it is going to be tired of replica of exotic structures. The public is learning to read rational and expressive architecture, and soon will require more. Let us then be ready for that. Just now let us see what are the important points which can be derived from the study of the human figure.

Fundamental rules for all arts are that there must be unity and variety. There must also be simplicity. These principles are exemplified in the human body. It is composed mainly of bones and flesh. The former assume each a peculiar shape—the shape best fitted to have it efficiently sustain its particular load, without being excessively heavy. Take the arm, for instance. Compare the three bones of this limb, which is created for the exertion of effort in definite directions, as ordered by the brain, to the numerous ribs, whose main function is to protect the vital organs. No conscious exertion has ordinarily to be made with our chest, and yet it has to resist pressure in some cases of danger to the vital organs. The lungs breathe, and this also requires the ribs to be flexible. Here we have number, with unity in the purpose of resistance and variety in the degree. The same reasoning is to be applied to any muscle.

We know that a muscle has to be able to contract and relax. This is the common unity in the great variety. Compare only the biceps and the latissimus dorsi, and you will soon have a striking idea of what variety in the unity means.

Applying this principle to architecture, we draw the plain inference that wherever the structure is a massive one, the support or the column ought to have a different expression from that where the weight or height is less. Instead, we not infrequently see buildings strewn with columns, the same one used at the top and at the bottom. How can the word rationalism be applied to such structures? In this way we give the public a false idea of art. How differently did the Greek architects build for the Romans! With what refinement did those architects study the succession of their superimposed orders, giving more strength to the bottom one and more refinement to the upper ones! I cannot account for those faults in many of our public buildings except by indifference in the study of Nature and particularly the human figure in relation to architecture. It is high time that a young man who is going to enter the profession should be well aware of the motives which led his ancestors and superiors to the introduction of his various courses of study. And let the student thoroughly understand that just as a book is subdivided in chapters, the chapters in paragraphs, and so forth, so is the Greek architectural composition. The Greek order is a wonder of simplicity and of clearness. The shaft, whose function is to support, is barren of ornaments; only the flutings to emphasize the vertical and give added color; then as the eye rises it meets centres of interest, the cap being the first one. Its location is a very proper one as being the transition from the vertical support to the horizontal lintel. We know that in the Doric order the cap, besides serving an æsthetic purpose, relieves the architrave. This is what accounts for the strong echinus of the Greek Doric order. Then the entablature, which is another chapter in the same order, and is subdivided into three paragraphs, the interest increasing as the eye travels from the one to the other. Most of the forms which we meet in the cornice are dictated by needs. So, for instance, is the corona which was to keep the walls free from rain, as also is the Cima, which is nothing but a gutter, and the lions' heads on the Cima which were ducts, as were later, to some extent, the gargoyles of the Middle Age. An observing mind easily sees how the lions' head and the projecting gargoyle are alike. On the one hand, the cornice itself protruded so much that the water fell from the lion's mouth far from the foundation, while in Gothic architecture the cornice jutted out slightly in relation to its height, and made necessary bristling gargoyles. To-day we feel the need of still greater protection, and neither lions' heads nor gargoyles would do when we have regard for the finery of a lady passing by the building. And this is why no more use is found for lions' heads, except as traditional relics and decoration.

We have seen that even the articulation of two bones is of interest to the architectural designer. Considering now the human face, nay, even the animal's, we notice at once that each half of symmetrical organs is so constructed in its outward appearance that it seems as though it alone could never fit the face. Each eye, for instance, is one-half of the organ of sight, and the disposition of the whole denotes that it is needed to gauge distances accurately. Of course one can see with a single eye, but it is by a prodigy of skill and with long habit that those so afflicted permanently can perform work which requires binocular sight. It is not uncommon to hear such persons complain of headache after they have done applied work.

By such an apparent digression I have tried to show how we may study upon our neighbor's face a principle which is of paramount importance in architectural design. When parts of a design are so placed as to imply symmetry there should be no clash, no incompleteness.

The mediæval architects knew this, and although the unsymmetrical cathedrals like that of Chartres preserve some odd features that make them remarkable and the centre of much interest on the part of tourists, yet those of Paris, Amiens, or Reims, etc., will forever claim the attention and command the respect of the spectator.

And, since we are speaking of the Gothic cathedrals, it is not irrelevant to point out the remarkable analogy between many of them and the human figure. Viewed from the side the cathedral may be easily compared to some sort of colossal statue representing the new religion raising her hands as a signal to rally around her. It seems almost as though you would soon see it move. This effect is undoubtedly due to the rhythm of the lines in profile. The cathedral does not in this respect satisfy those critics who want buildings to inspire the idea of immutability like the pyramid, which is the best expression of perfect balance and everlasting stability, but this objection shows the cathedral under even better light, for it represents a new conception of the architectural art. Like sculpture, architecture has become expressive. It has borrowed many points from the stable pyramid and combined them with principles which we find illustrated by the human face. Observe the towers of cathedrals. Being situated on either side of the centre, they are each one asymmetrical, the outward corner of each being always the strongest, thus affirming the fact that neither tower could exist separately in this manner, but must be part of a whole.

Wherever circumstances require absolute symmetry, its absence mars appearances, the impression being one of ill fate, or of a whole composed by different minds at different times, which, by the way, is true of many cathedrals. But in most cases of old buildings with more recent additions, the differences in color or in the weathering are sufficient notice to the intelligence, so that a strict symmetry is not expected. The age of the structure is thus written on it.

Passing now from mere details to grouping or designing, we find in the human body splendid teachings. Elaborate in its component parts as this body is, how simple its outward appearances! Vital and other organs are so wonderfully combined as to allow the whole to be very simple, hence safer from trouble. Notice now the merging of the head above the shoulders. What could be more eloquently and simply done? The king of creation may with ease scan a wide angle without budging his body, exerting his watchfulness in a royal manner in all directions but the rear, in keeping with his ambitious instinct to forge ahead. The majesty of man, that which makes him close to divine, is attested by his simple appearance. All his means of defense lie within his brain, and his hands are the most perfect tools that nature could bestow upon him.

It has been made clear above that there is a lesson to be derived by the artistic scholar from this close observation of man. The least that a student architect ought to learn from this analysis is: simplicity of design, no matter how intricate the problem. Head, chest, abdomen, and limbs are the four chapters (or five by counting arms and legs separately) of the body, which contains hundreds of organs for different functions. Yet they are so wonderfully combined that five names are sufficient to head them: the senses (or head), vital organs and blood circulation (or chest), digestion (or the abdomen), locomotion (legs and feet), prehension (the hands).

In the same manner the good professors have always taught design. Starting from the plan, we must think of the main functions that are to be performed by the parts of the structure; then we will try to compose the different parts of each function harmoniously and in keeping with the whole, making the most important—however small in comparison with the structure—a conspicuous feature. There again the analogy with the human being is striking. All the various organs of the body are but servants of the head; they form the bulk. Yet the head is the most conspicuous part of man, because of its location, its modelling, expression, shape, and coloring. It far exceeds any other part of the body in interest and in beauty.

This goes to show that a chief feature in a public or a private building does not necessarily require to be huge. A town hall, for instance, by its very definition is the hall of the people. But the importance of the town determines that of the subservient parts. Thus, while the aldermen's chamber will constitute nearly the whole structure in a small town, in a large city this head of the city hall will have so many subordinate parts that it will require sometimes an additional feature like the traditional little belfry to make it conspicuous. From the careful study of this relation of the "head" of a composition to the "body" may ensue the character of the composition. Simplicity and clearness, without disregarding proportions, are essential both for the sake of easy preservation and for grandeur. No sooner do we begin to complicate our main lines than we drop into the realm of the fanciful, and consequently of weakness.

Of course there are exceptions. Fancy, even frivolity, in the appearance of a residence may convey to the observing mind the idea that the house needs no special care for its preservation, its tenants being safe from attack. Apparent weakness in this case becomes the expression of self-confidence. (Like Sparta of olden times, which had no walls to protect her from the foe, relying for this task upon her youths.) The Palace of Versailles, though majestic and somewhat severe, in its general lines, is the expression of peace when compared with the fortified château of the Middle Ages.

Editorial and Other Comment

Encouraging Good Taste in Architecture

THE recent award of prizes in New York City by the Fifth Avenue Association for the best new or remodelled buildings erected during the year were given with an encouraging consideration for sanity and reserve in design. We are hearing, now and then, considerable oratory and reading quite often appeals for originality and the so-called Americanization of our architecture, but as a rule in the final analysis there is a feeling that a proper respect for tradition is worth while, and above all a sensible consideration of the fact that in architecture, as in clothes, conservatism is best.

The first prize was given to the Textile Building, Inc., on Fifth Avenue, designed by Sommerfield & Stechler, a building of dignified appearance, well proportioned and, above all, adequately lighted for its use as stores and offices. The second prize went to the New York Bible Society for its building, at 5 East 48th Street, designed by Wilfred E. Anthony, architect. We should have inclined to put it number one, for it seems an especially happy and appropriate design for its purposes with its elements of ecclesiastical Gothic.

The prizes for alterations were given to J. and J. T. Cousins, 17 West 57th Street, George A. Schonewald, architect, and to Schmitt Bros., 523 Madison Avenue, Schwartz and Gross, architects.

The architectural harmony committee has done fine work in putting restraint on the vagaries of both owners and architects who are tempted to build without regard for the general artistic good. Without putting any unreasonable restrictions upon construction, this committee has, in general, kept recent developments in the business district fairly within the limitations of good taste and good architecture.

A number of alterations and new buildings have taken the place of old structures on Fifth Avenue in recent years, and with few exceptions one can look them over with a considerable degree of satisfaction. In fact, both the native New Yorker and the visitor "in our midst" can study many of these recent buildings with profit to his knowledge of architecture in general.

We often wonder if the average man in the street ever stops long enough to notice whether a new building has any merit beyond its mere bulk worthy of a little serious observation. He will look up to the sky-scrapers and marvel a brief moment until the next one comes along, and ignore the modest little building that may be a much greater achievement.

Thousands know the names of the big buildings, but it would be an exaggeration to say that even hundreds know the names of the architects who have designed them.

It is this way not only with our business structures but as well with many of our national and local monuments.

A building is a building, nothing more!

Going Up

WE may at least find much encouragement for the future in recent facts supplied by the F. W. Dodge Co.'s review of building activities. Last year's figures have been improved, with residential buildings leading all other classifications. Predictions are made that present increased activities will continue into the winter months. People have become tired of waiting as well as hopeless of any material reduction in costs and are going ahead under forced draft to build places in which to live. With every possible effort there is no possibility of catching up with the pressing need.

"Conditions now are much more favorable to the home-builder than they were last year. If expected improvements develop in the field of finance and a substantial recession is had in the cost of building loans by spring, it will be possible to say to the prospective home-builder, without reservations or equivocation, that he takes no unusual chances on his building investment."

French Architects to Teach at Harvard and the Massachusetts Institute of Technology

TWO distinguished French architects, Albert Ferran and Jean Jacques Haffner, both of them winners of the Grand Prix de Rome, one of the highest honors to which architects aspire, have accepted invitations to come to this country to teach. Ferran will have charge of design at the Massachusetts Institute of Technology, where he will hold a professorship, while Haffner will be professor of design at the School of Architecture at Harvard.

Upon their arrival, it is said that Boston will be the only place in the country where two Grand Prix winners are united in teaching architecture in schools which co-operate closely. The departments at Harvard and M. I. T. frequently engage in "conjunctive problems" in architecture, a fact which will give Ferran and Haffner a chance to work together and supplement each other's gifts. The two men, both of whom speak English fluently, are close friends.

Who Is to Blame?

THE recent collapse of a theatre building in Brooklyn with a lamentable loss of life and the serious injury of many workmen engaged in its construction should be relentlessly traced to its causes, and those responsible punished to the extent of the law. Speculative building, without regard to every precaution against even the thought of such happenings, should not be possible. Think what might have happened if the building had been completed and it had fallen upon an audience of hundreds of people. Rainy weather is certainly no excuse, and economy that permits the use of poor and doubtful materials is no less than criminal.

Book Reviews

DANIEL H. BURNHAM, ARCHITECT, PLANNER OF CITIES. By Charles Moore. With illustrations. 2 volumes. Houghton Mifflin Co., Boston.

This monumental life of Mr. Burnham, one of the foremost American architects, by Mr. Moore, his long-time friend and associate, becomes, by reason of Mr. Burnham's relations with other kindred spirits of his time, a notable record of the personalities of a remarkable group of American artists and architects. Mr. Burnham came of stout New England ancestry, and was a boy of the regular sort, whose later career was developed by sheer force of inherent will and a fine degree of sympathy with and understanding of the capacities of other men with whom he became associated. He had the rare qualities of a good organizer combined with a vision of the things that lay beyond mere business efficiency and belonged to the domain of the imagination. The two qualities are essential in all big achievements, and Mr. Burnham's life manifested the truth of this statement in a high degree.

"He was never so much of a business man that he was not also an artist. He felt as an artist, thought as an artist, and when he came up against his limitations in knowledge or as a creator, he never failed to recognize those qualities in others."

How true are these words when we read of the partnership formed with John W. Root, and of the way these two men of such different temperaments worked together to such notable ends, and how they account for the great achievement of Mr. Burnham's life—the wonderful and beautiful World's Fair at Chicago.

No one man's genius could have realized such an achievement. It took a man of great executive and organizing ability and a man big enough also to recognize the ability and special training of the men with whom he surrounded himself. The story of the building of the World's Fair is a story of the Renaissance of American art and architecture. To be sure, this began with the Centennial Exposition at Philadelphia, but at Chicago it passed its infancy and showed signs of a fine maturity worthy of the country.

Associated with Burnham & Root were Richard M. Hunt, McKim, Mead & White, George B. Post, Peabody & Sterns, Van Brunt & Howe, Burling & Whitehouse, and other noted firms. Frederick Law Olmsted was the chief landscape architect. But these bare statements signify little unless we go further and speak of the splendid and inspiring spirit of enthusiasm that united all concerned in the enterprise and the friendly intimacies that developed not only among the architects but among the painters and sculptors who added so much to the distinction of the buildings. Saint Gaudens co-operated in the selection of the sculptors, and Frank Millet, that prince of friends and fine artists, was a never-failing and willing aid and promoter of good humor and remover of friction. McKim's force and fine taste and scholarship were early in evidence, and Charles B. Atwood, who became a member of Mr. Burnham's firm, was a large factor in the work of the Fair. One of the most interesting chapters of the book is that on "The Friendships of the Fair," a story of the intimate associations of the architects and artists who gave themselves without stint to the successful accomplishment of the result.

It is an intimate biography that Mr. Moore has written, and the letters, extracts from diaries, speeches, and comments upon all sorts of occasions have a personal interest for all those who would follow Mr. Burnham's career in detail. He was a national figure concerned in many important national and local civic developments, such as the Senate Park Commission Plan in Washington, the new West Point, the Union Station at Washington, the Civic Centre at Cleveland, the San Francisco Plan, the Chicago Plan, the Plan of Bagnio, Philippine Islands, and the city of Manila. The information contained in the chapter on the building of the Washington Cathedral will be read with much interest.

In 1893 Mr. Burnham was elected president of the American Institute of Architects at Chicago, and he was prominently identified with the American Academy of Rome, of which Charles F. McKim was the founder.

Mr. Burnham's various trips to Europe brought him much needed recreation and gave him many new impressions of Old World architecture. His letters from Europe are full of interesting architectural comment, especially those upon some of the great Gothic cathedrals.

The firm of Burnham & Root was the designer of the famous Montauk Block in Chicago, known as the first "sky-scraper," precursor of the great tall buildings that have followed all over the United States.

The book is the story of the beginning and growth of Mr. Burnham's career, of his methods of thought and work, of his association with the leading men of his time, and of his many contributions to architecture in America. It is a notable contribution to our architectural history. The illustrations add greatly to the value and interest of the volume and include a number of full-page drawings reproduced in color and a fine portrait of Mr. Burnham from the painting by Zorn.

The complete chronological list of buildings designed by Burnham & Root and by D. H. Burnham and by D. H. Burnham & Company gives an impressive idea of the breadth of Mr. Burnham's activities and the immense volume of business involved.

SMALL FRENCH BUILDINGS. The Architecture of Town and Country, Comprising Cottages, Farmhouses, Minor Chateaux or Manors with their Farm Groups, Small-Town Dwellings, and a Few Churches. By Lewis A. Coffin, Jr., Henry M. Polhemus, and Addison F. Worthington. Charles Scribner's Sons, Publishers, New York.

The authors of this handsome and valuable book, who are all practising architects, planned the work while serving with the army in France.

They were impressed with the interest and suggestive values of the simple buildings they saw in the small towns and surrounding country, and realized the great lack of any really satisfactory collection of photographs in this attractive field.

They have done the profession a service in making available so many interesting examples of the minor architecture of France, so rich in its variety and so suggestive in its picturesque use of materials.

The illustrations cover a wide range of country and offer to the architect a little-explored field. It is surprising to know how little available material has been accessible until the publication of this book.

The small-town architecture of England and Italy is well known, but for some reason France has been overlooked. And yet few countries offer a more interesting field for the architect. One well-known firm of American architects has written the authors thanking them for the help obtained from one of the farm groups shown among the illustrations.

The illustrations are grouped under the following heads: Cottages, Chapels, Town Houses, Chateaux, Manors, Farm Groups, and Details. There are a number of measured details and drawings in pen and ink.

In the introductory text to each section is pointed out particular features worthy of especial attention.

The plates, printed in a brown ink, have an exceptionally attractive and artistic richness of effect that adds much to the appeal of the book, which has won the instant approval of every architect who has seen it.

ENGLISH CHURCH MONUMENTS, A. D. 1150–1550. An Introduction to the Study of Tombs and Effigies of the Mediæval Period. By Fred H. Crossley, F.S.A.

The author deals with the materials, origins, and makers of the old tombs and effigies that are such a notable feature of the English churches and with their color decorations. For the architect the chapter on "The Architectural Decoration of Tombs and Country Chapels" is especially valuable, and as well the one dealing with Costumes and Brasses. The illustrations tell the story of the development of the art in the construction of these church monuments, and in fact provide a very complete graphic history of the varied architectural forms the memorials display, and the changes that took place in the carvers' ideals.

It is a valuable book for the architect's library and for all those concerned in the designing of church and other monuments. The book covers a field but very inadequately represented heretofore. There is a very full index, and a glossary of terms that adds much to the value of such a reference.

HOMES OF MODERATE SIZE. A Collection of Photographs and Plans of Modern Suburban and Country Homes, following the Colonial, Italian, and English architectural styles, and arranged accordingly. Selected for their artistic merit and adaptability to the needs of the average American family from the work of Kenneth W. Dalzell, Architect, M.A.IA. Arranged and edited by Edward F. Hammel, Architect. The U. P. C. Book Co., Inc., 243–249 West 39th Street, New York.

Mr. Dalzell's work is well known, and he has to his credit a number of attractive homes in the New Jersey suburbs, notably at Maplewood.

FURNITURE AND INTERIOR DECORATION OF THE ITALIAN RENAISSANCE. By Frida Schottmuller. With five hundred and ninety illustrations.

The large number of excellent plates make this book one of exceptional comprehensiveness and value. Brentano's, New York.

MODERN BUILDING SUPERINTENDENCE AND THE WRITING OF SPECIFICATIONS. By David B. Emerson. Charles Scribner's Sons, Publishers, New York.

A little book written by a man of long experience in the profession, simple and direct in style, that should be in the library of every draftsman and student and of practical service to those concerned in up-to-date building methods. The chapters on specification writing should prove helpful to the young architect.

THE WOODWORKER SERIES

DETAILS OF CABINET CONSTRUCTION—WOOD TURNING. J. B. Lippincott Co., Publishers, Philadelphia.

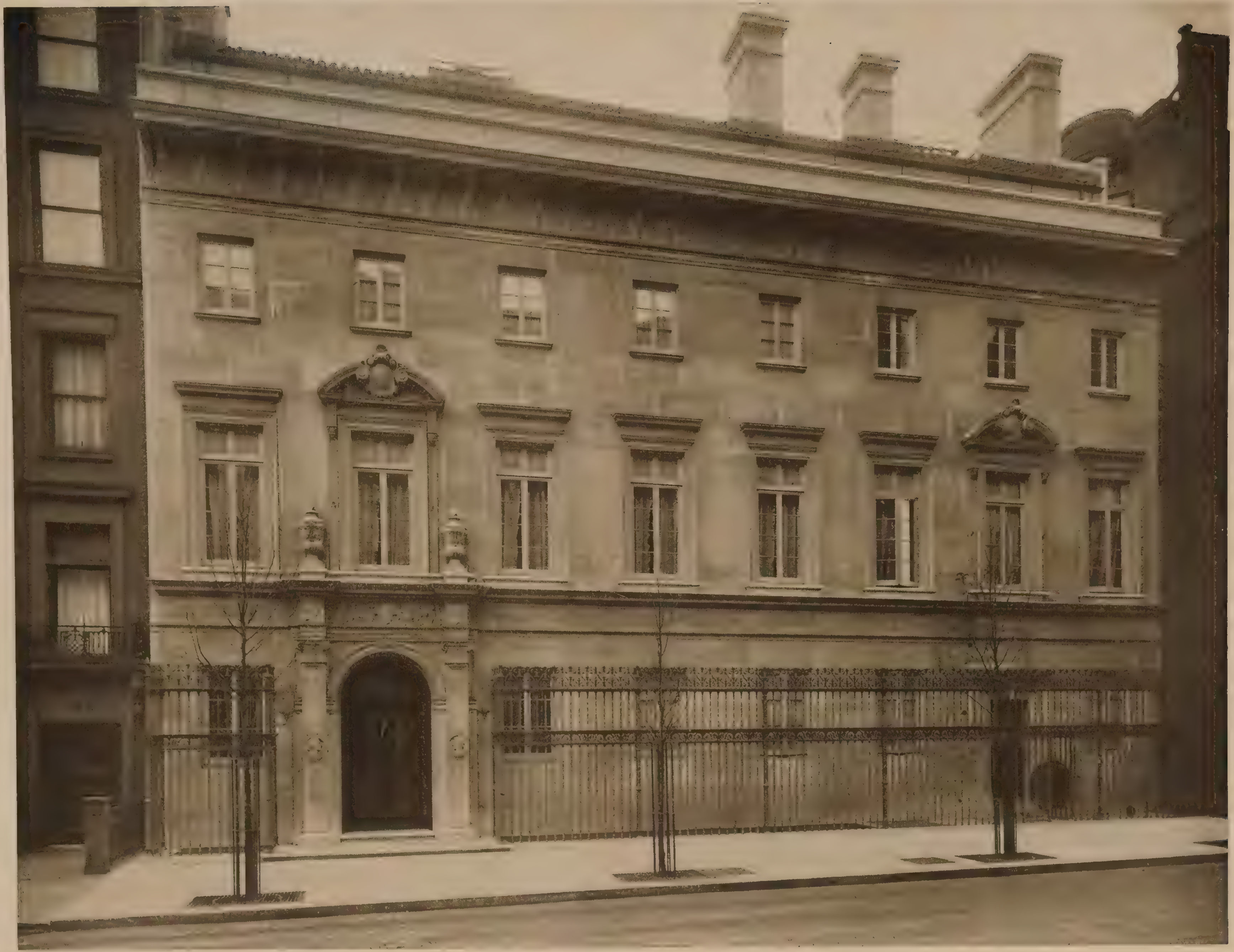
These handy little volumes with their numerous illustrations and explicit texts are mighty useful books to have around. They tell how to do so many things with which every householder is concerned, and they will appeal with fascinating interest to the handy man or woman about the house, to every one who likes to make things with tools.

The series is one of every-day practical service.

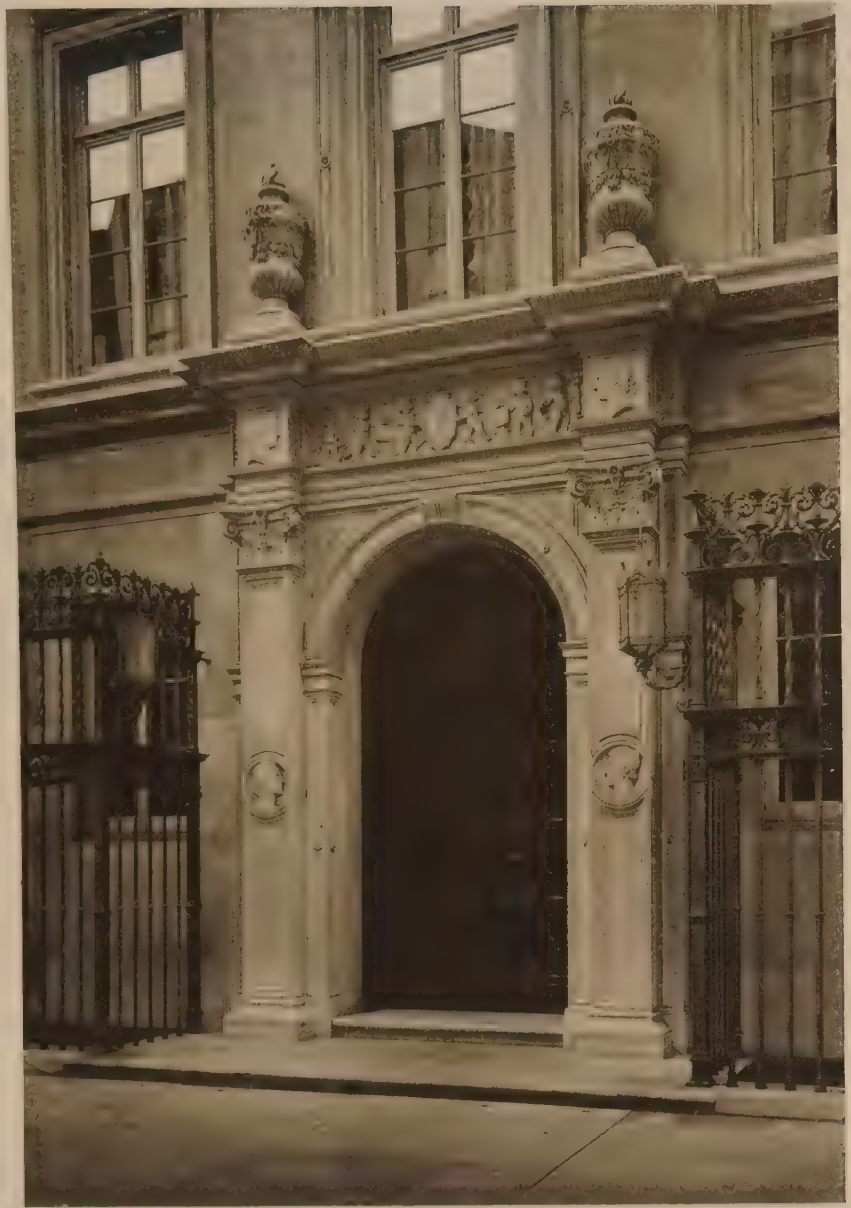
PRACTICAL STRUCTURAL DESIGN. A Text and Reference Work for the Engineers, Architects, Builders, Draftsmen, and Technical Schools; especially adapted to the needs of self-tutored men. By Ernest McCullough, C.E., Ph.D., Member American Society, Civil Engineers, Lieutenant-Colonel, U. S. Army, A. E. F. Second edition. U. P. C. Book Co., New York.

The book deals with External Forces, Internal Forces, Problems in Design of Beams, Girders, and Trusses, Joints and Connections, Gothic Statics, Columns and Structures, Semi-rigid Frames.

The author says "that 95 per cent of the work done in the design of structures could be explained to men whose knowledge of mathematics does not extend beyond that taught in high school."



RESIDENCE, MRS. GLADYS WATSON ZIEGLER, 2 EAST 63D STREET, NEW YORK. Sterner & Wolfe, Architects.



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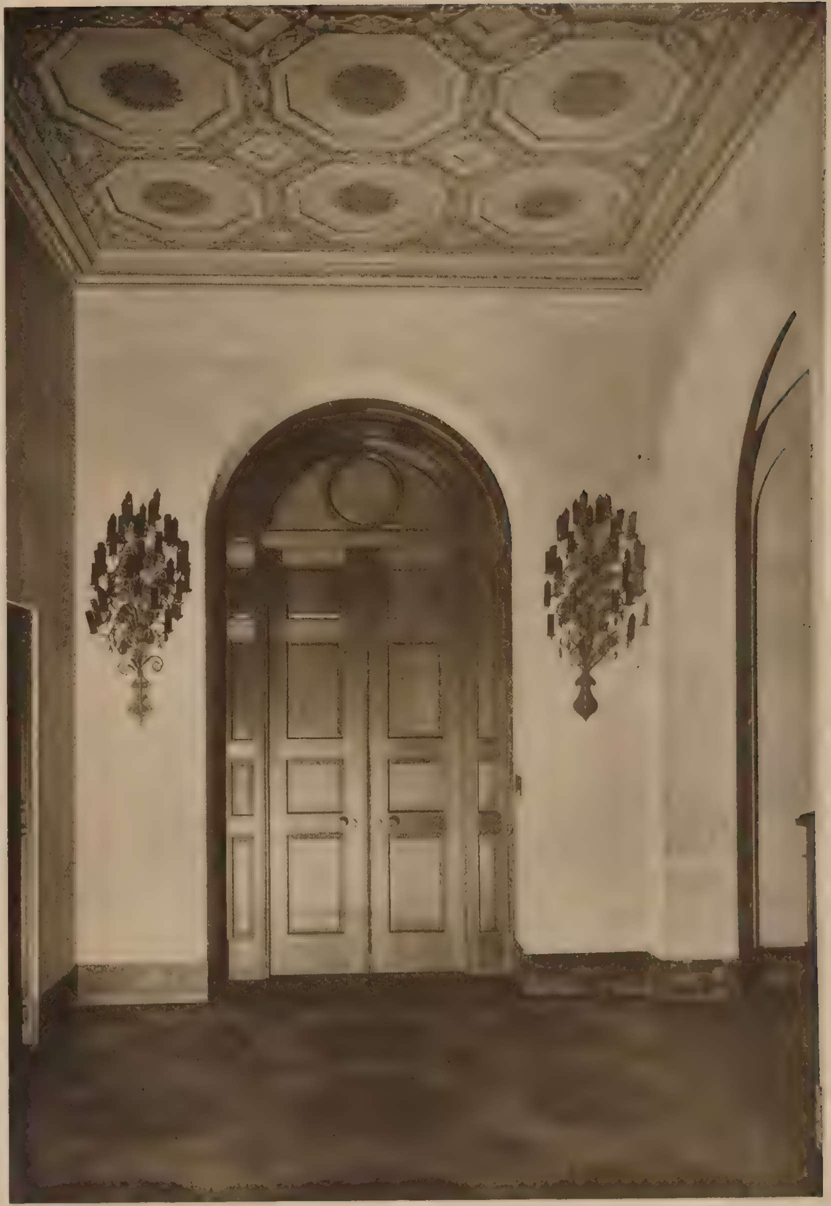

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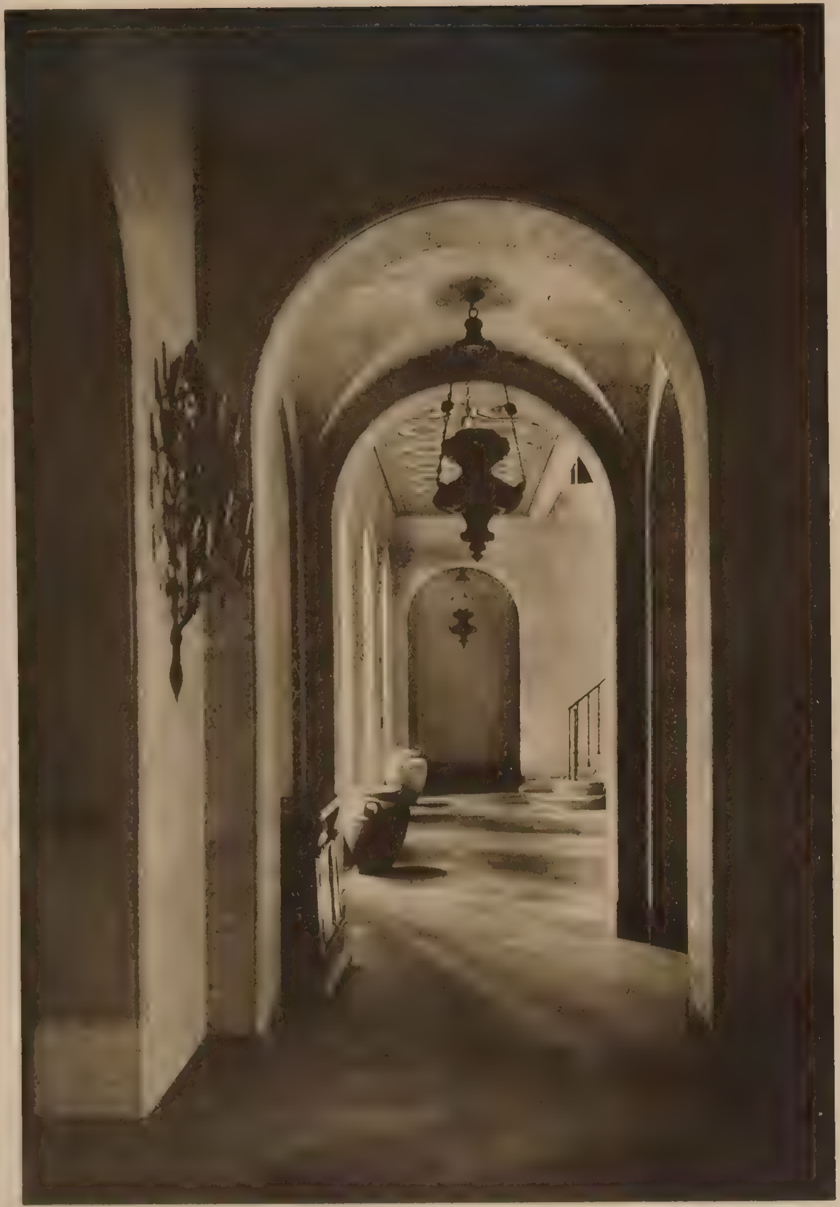

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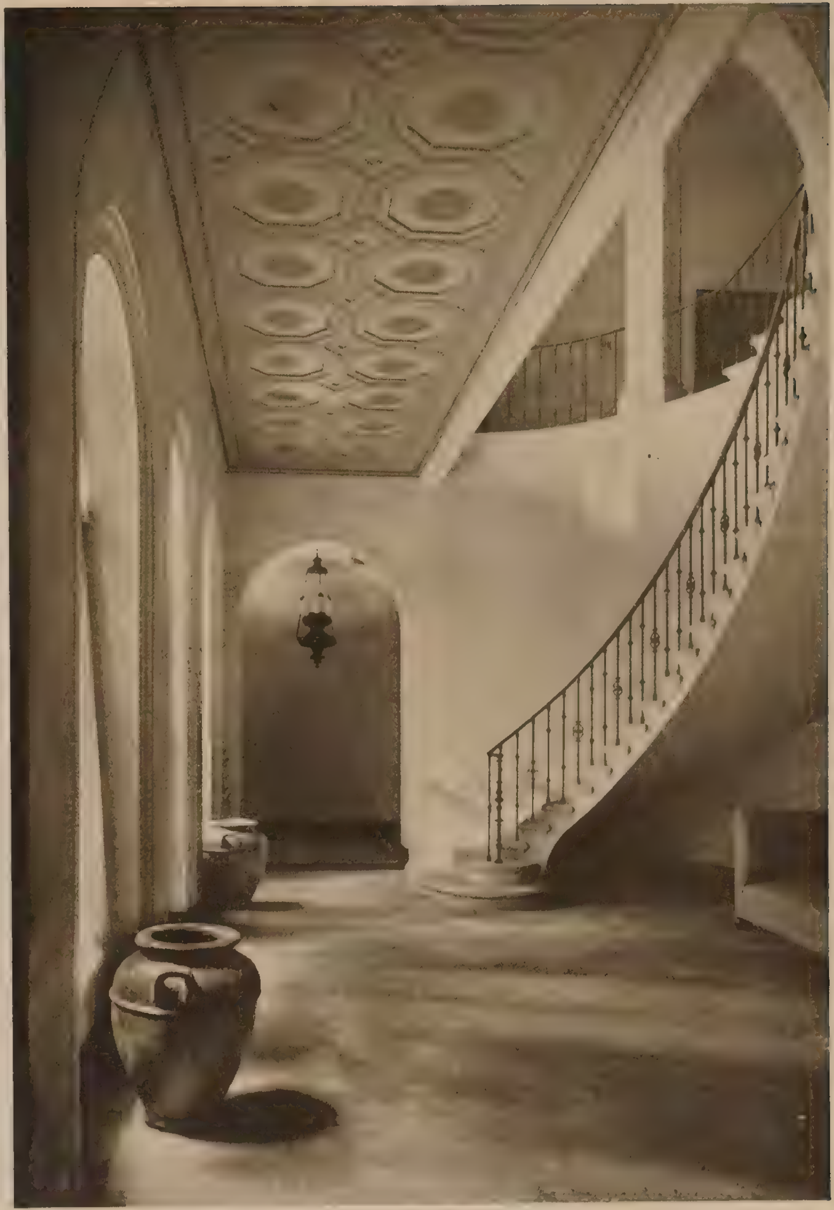

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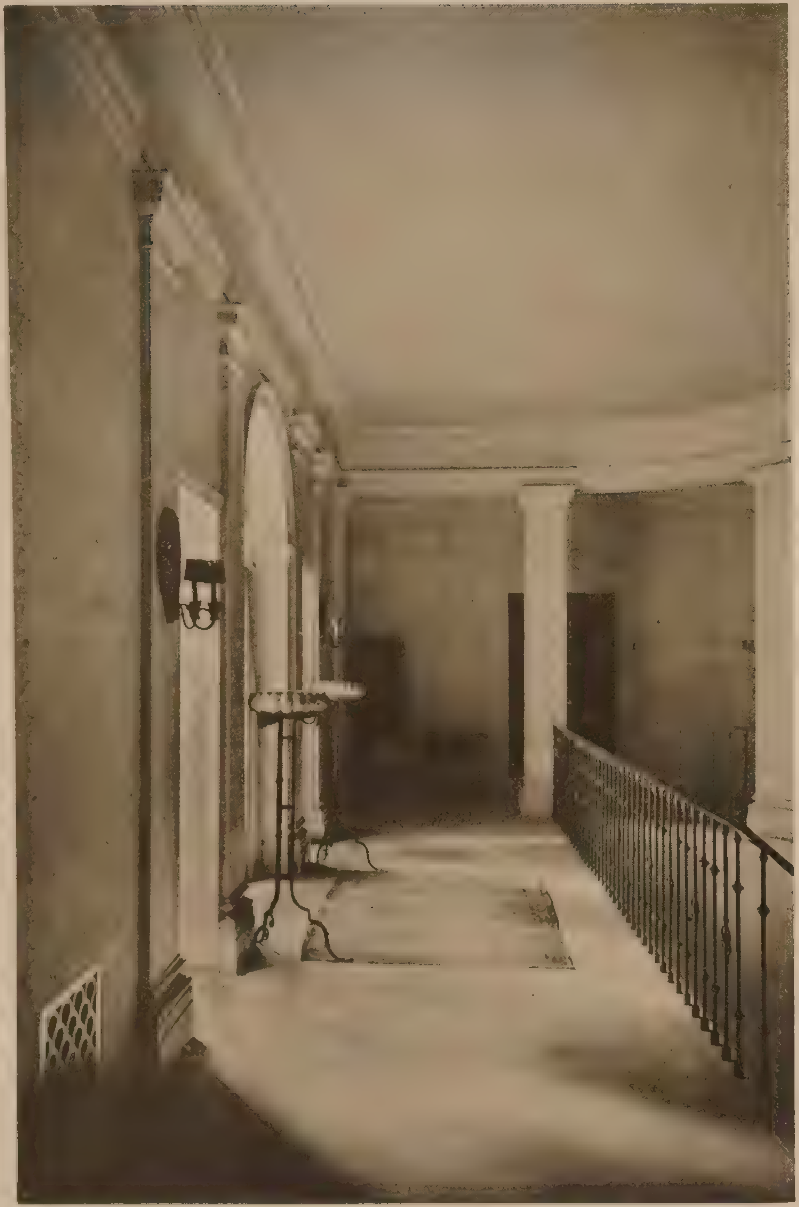

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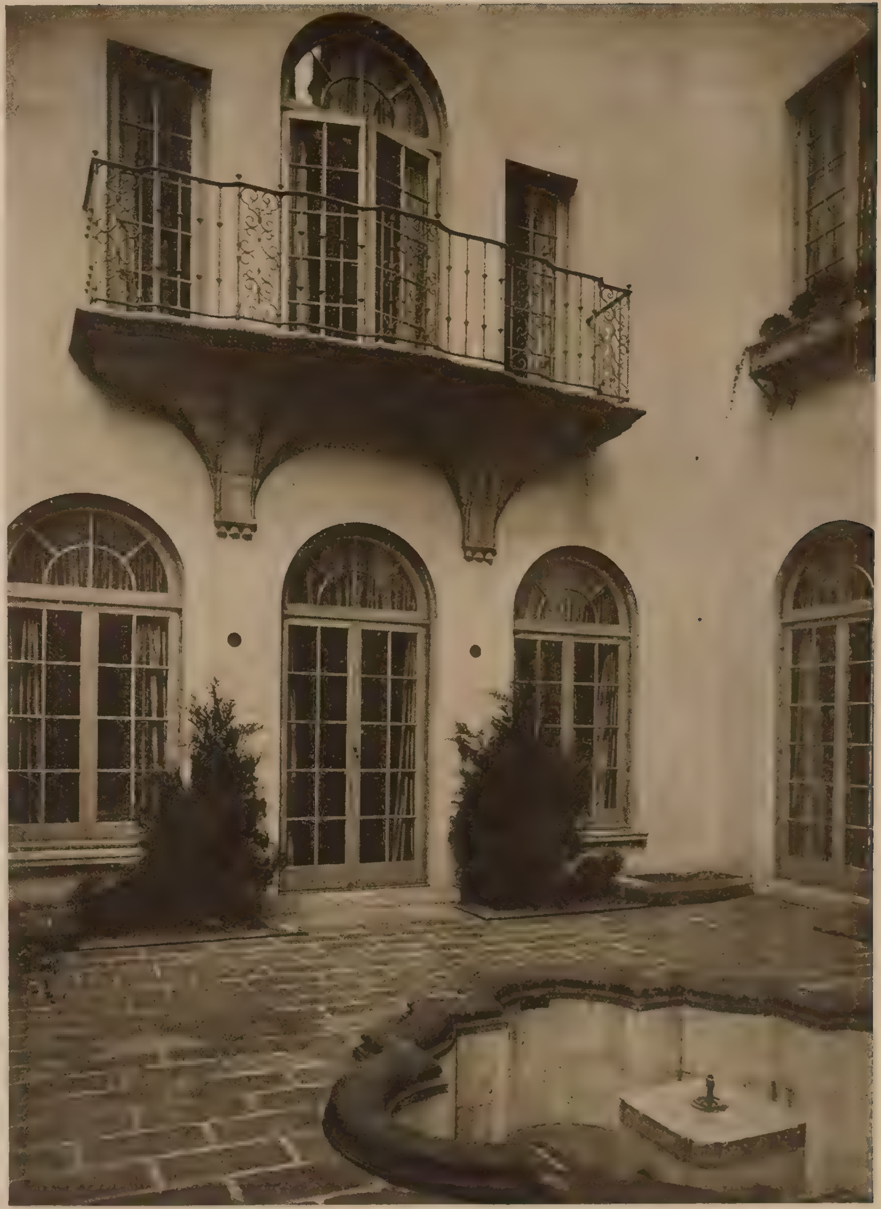

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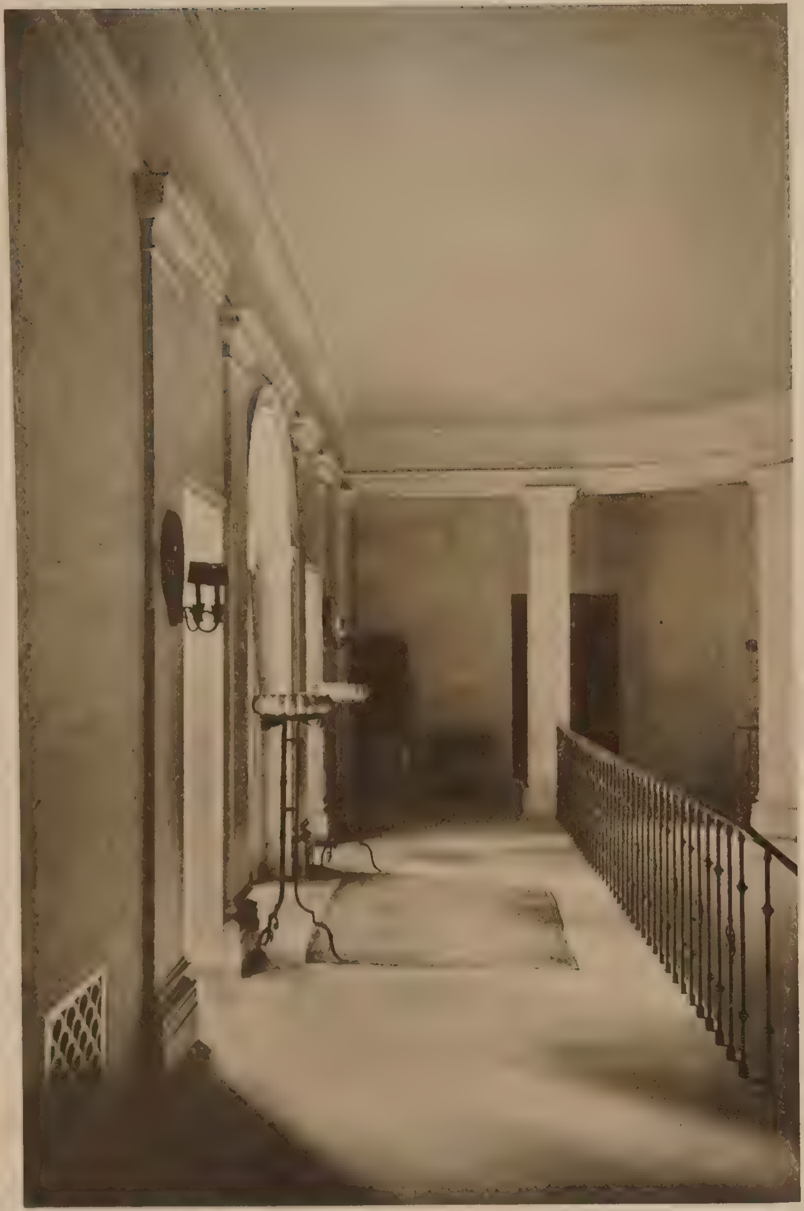

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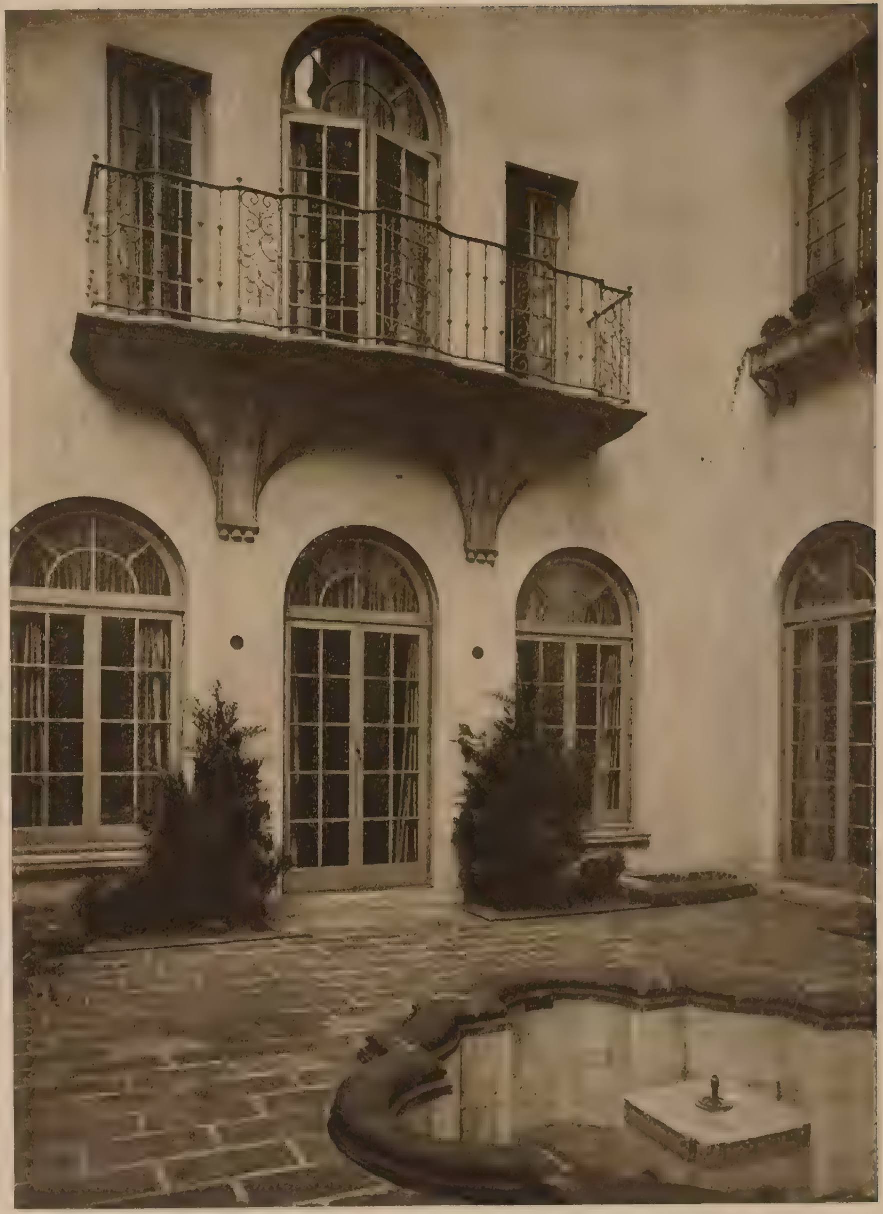

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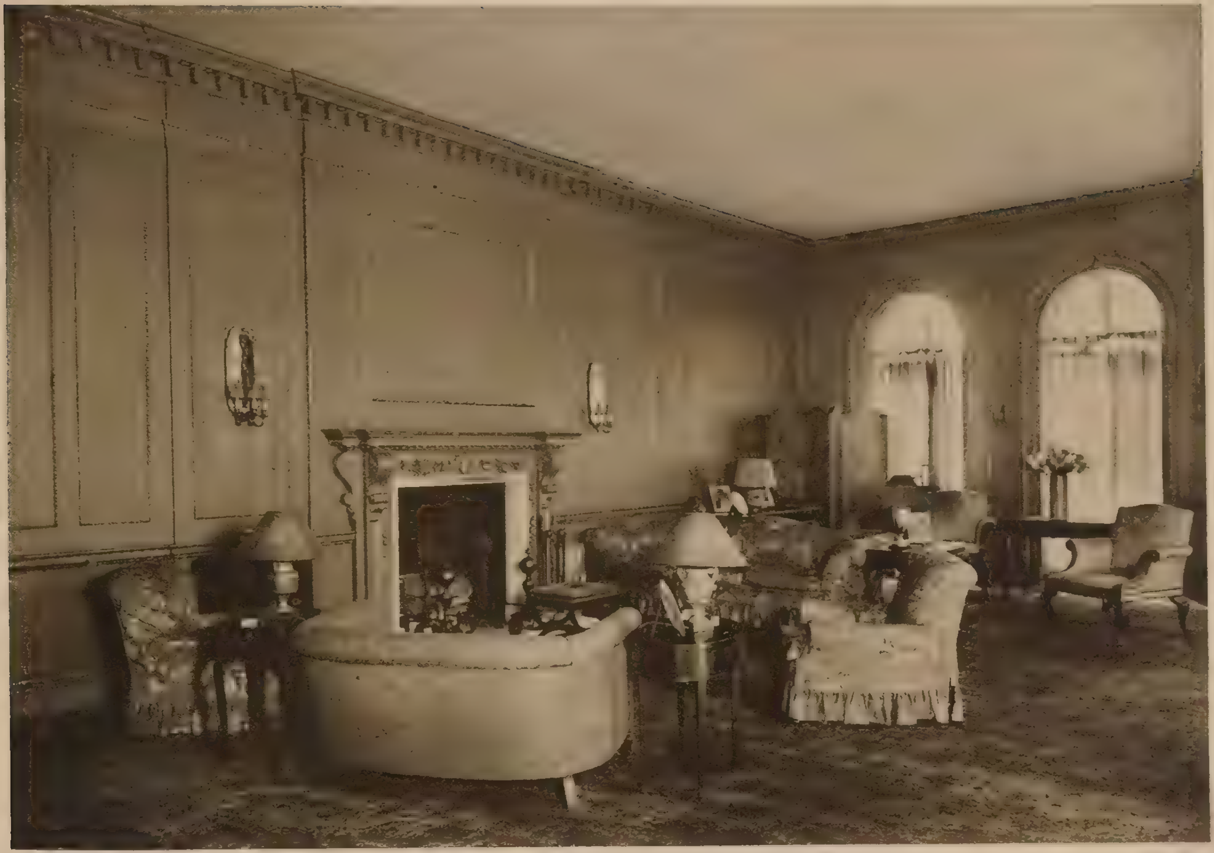
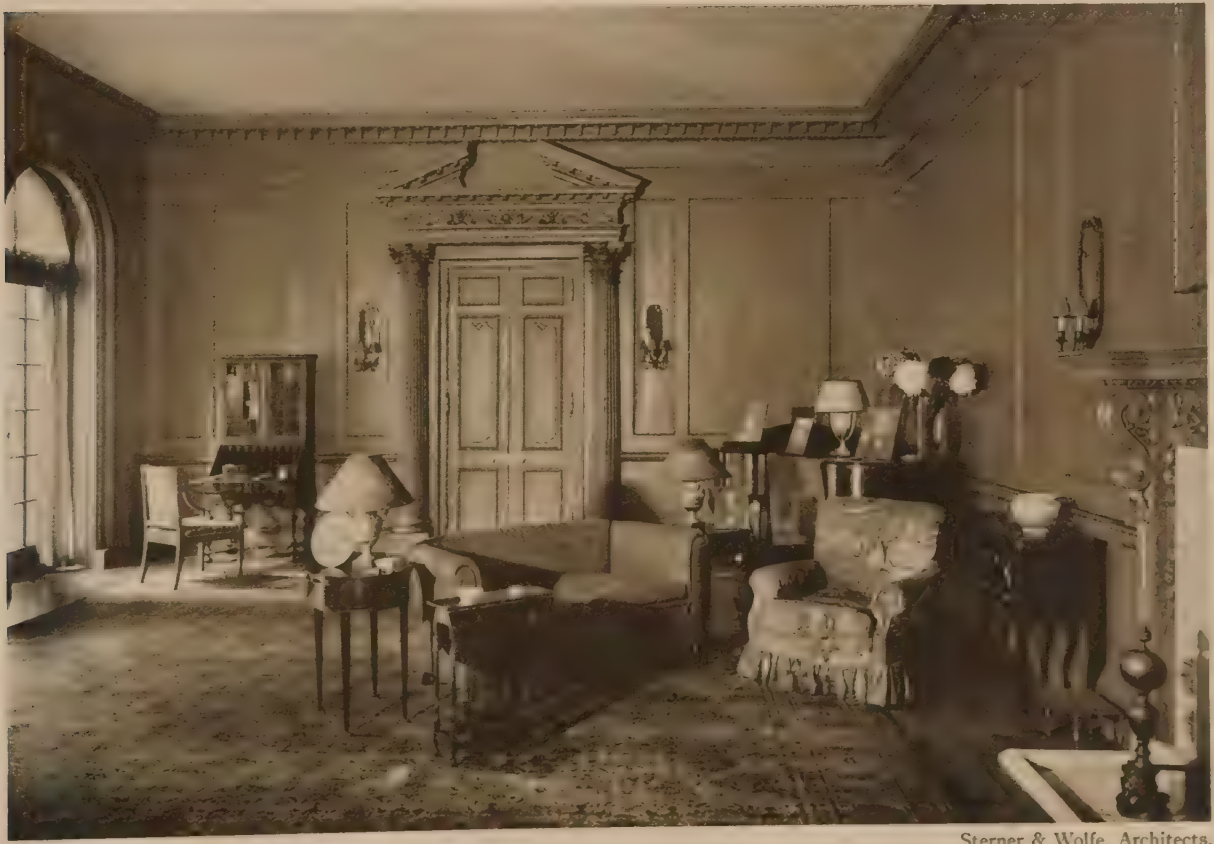
RESIDENCE, MRS. GLADYS WATSON ZIEGLER, 2 EAST 63d STREET, NEW YORK.



LIVING-ROOM.



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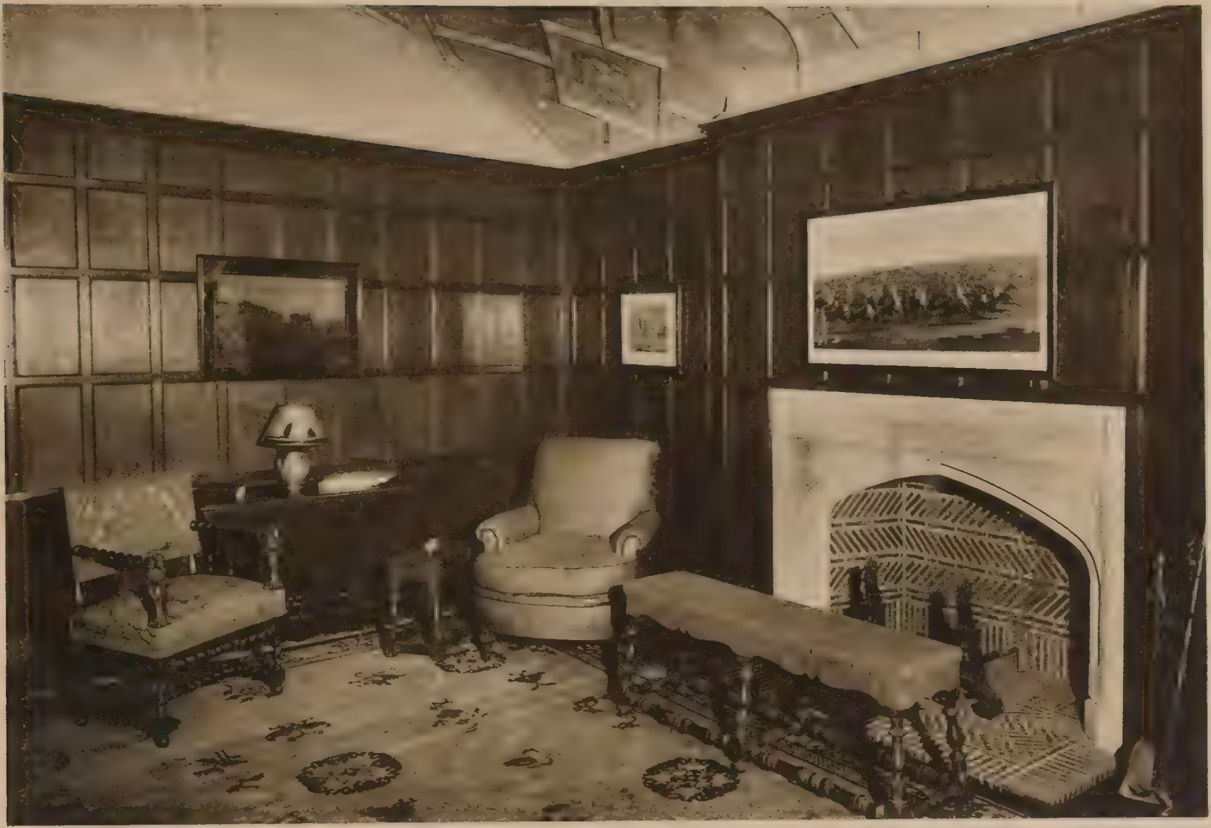

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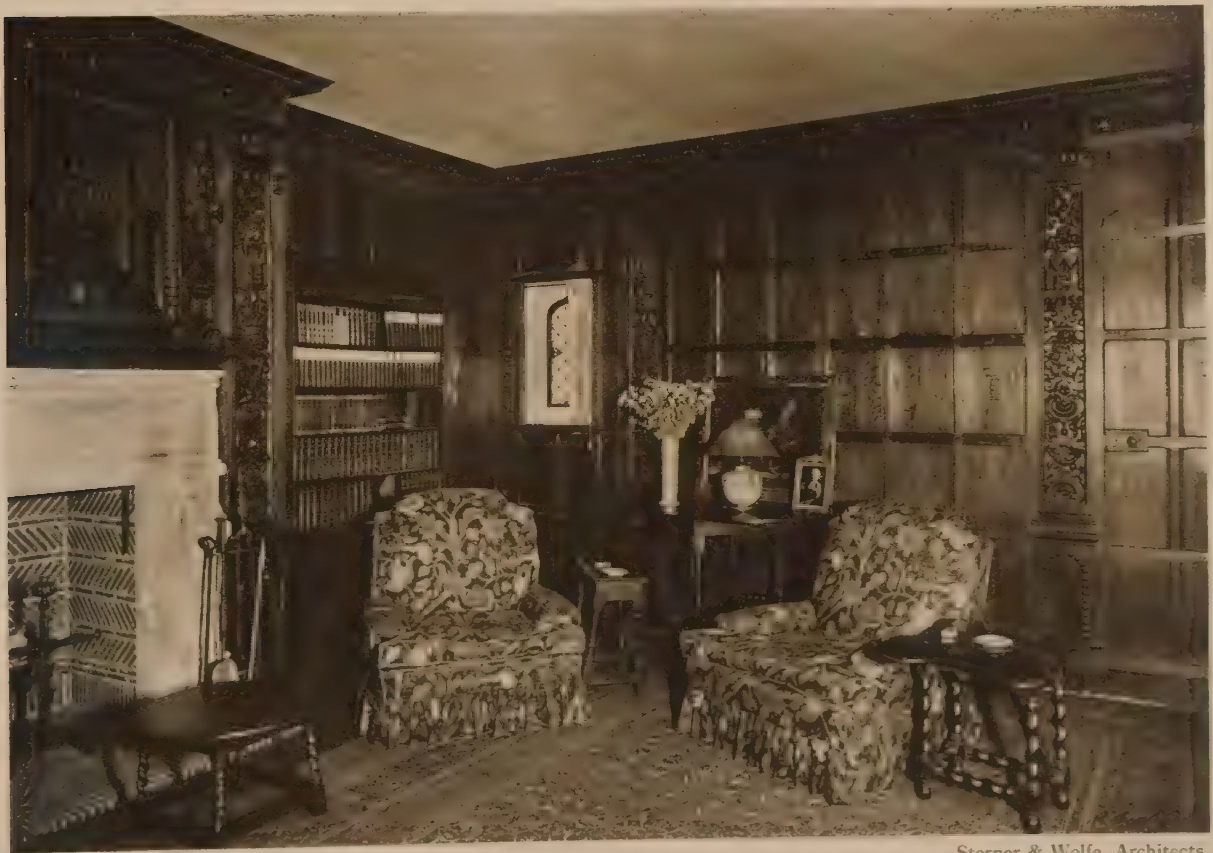

LIBRARY.

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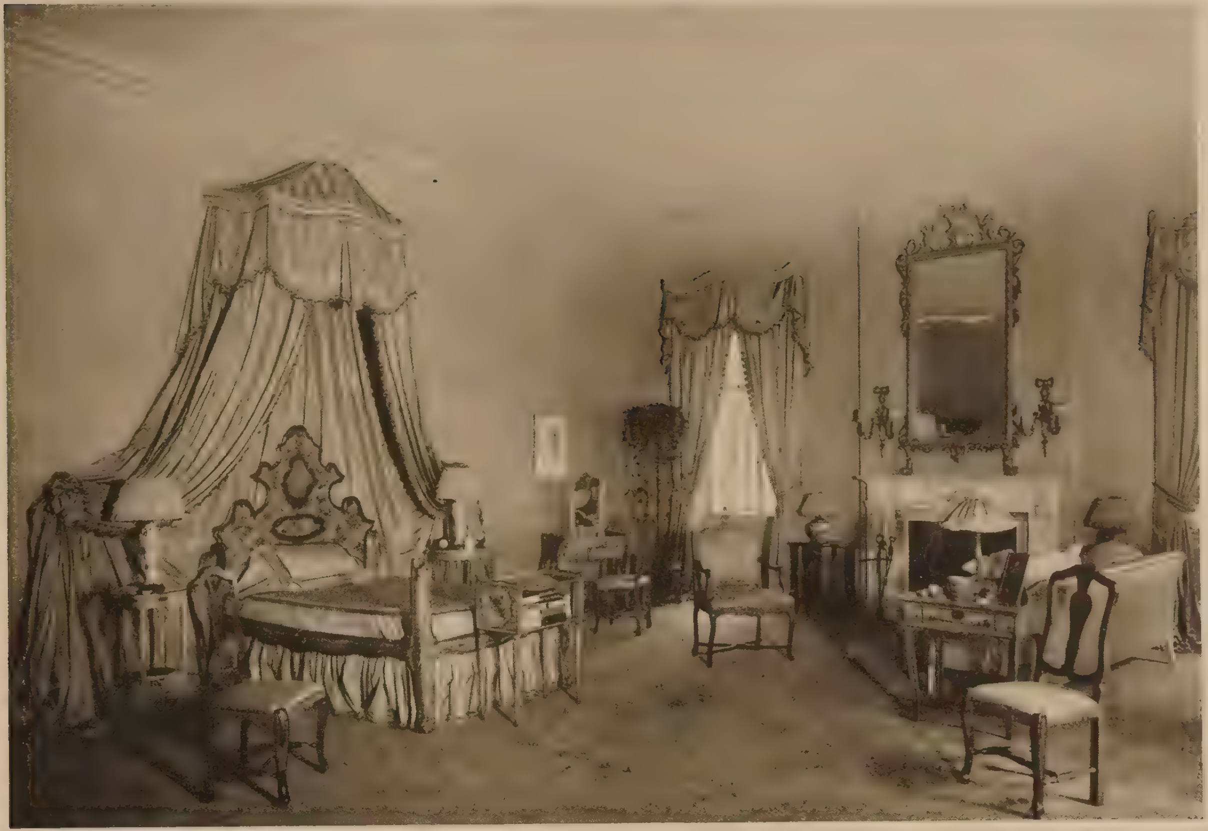

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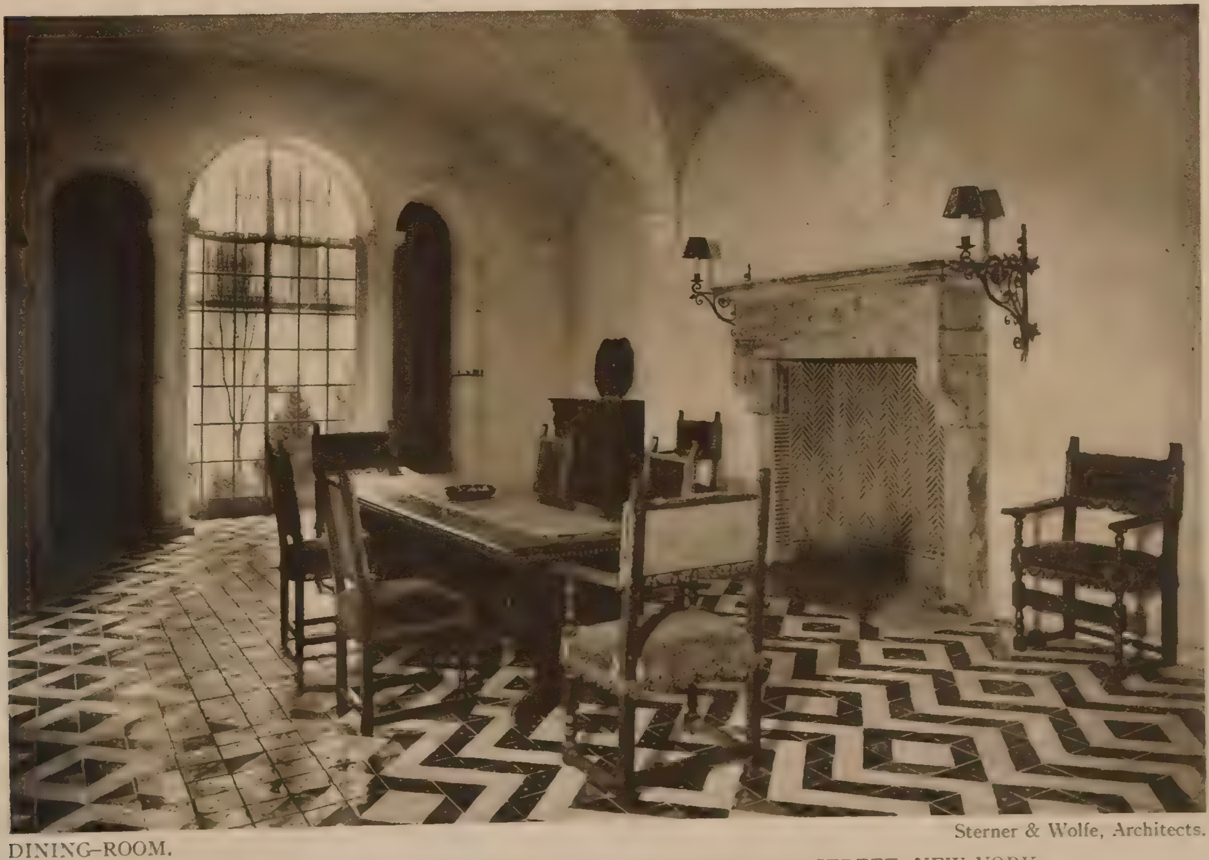

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DINING-ROOM.

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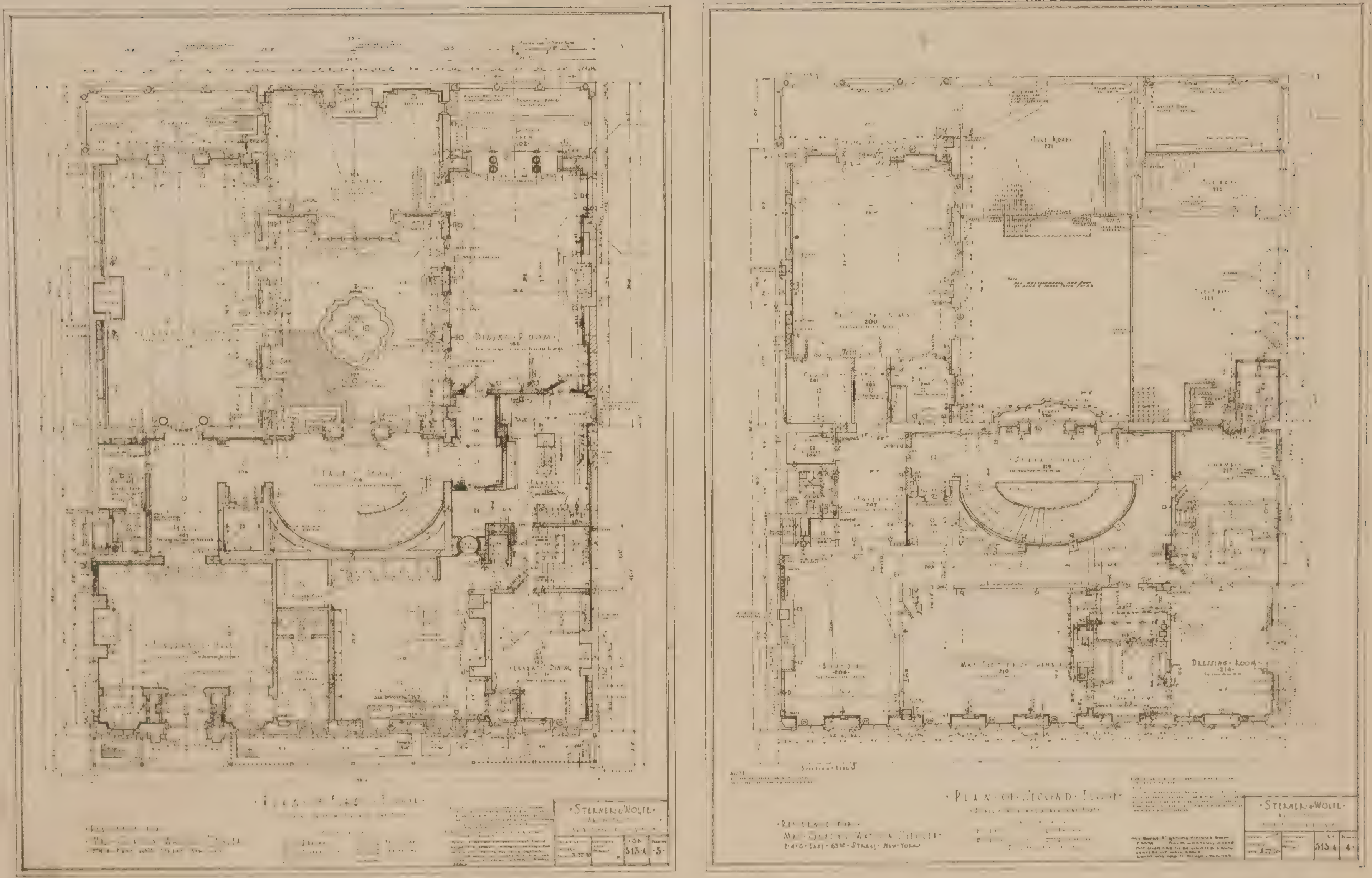
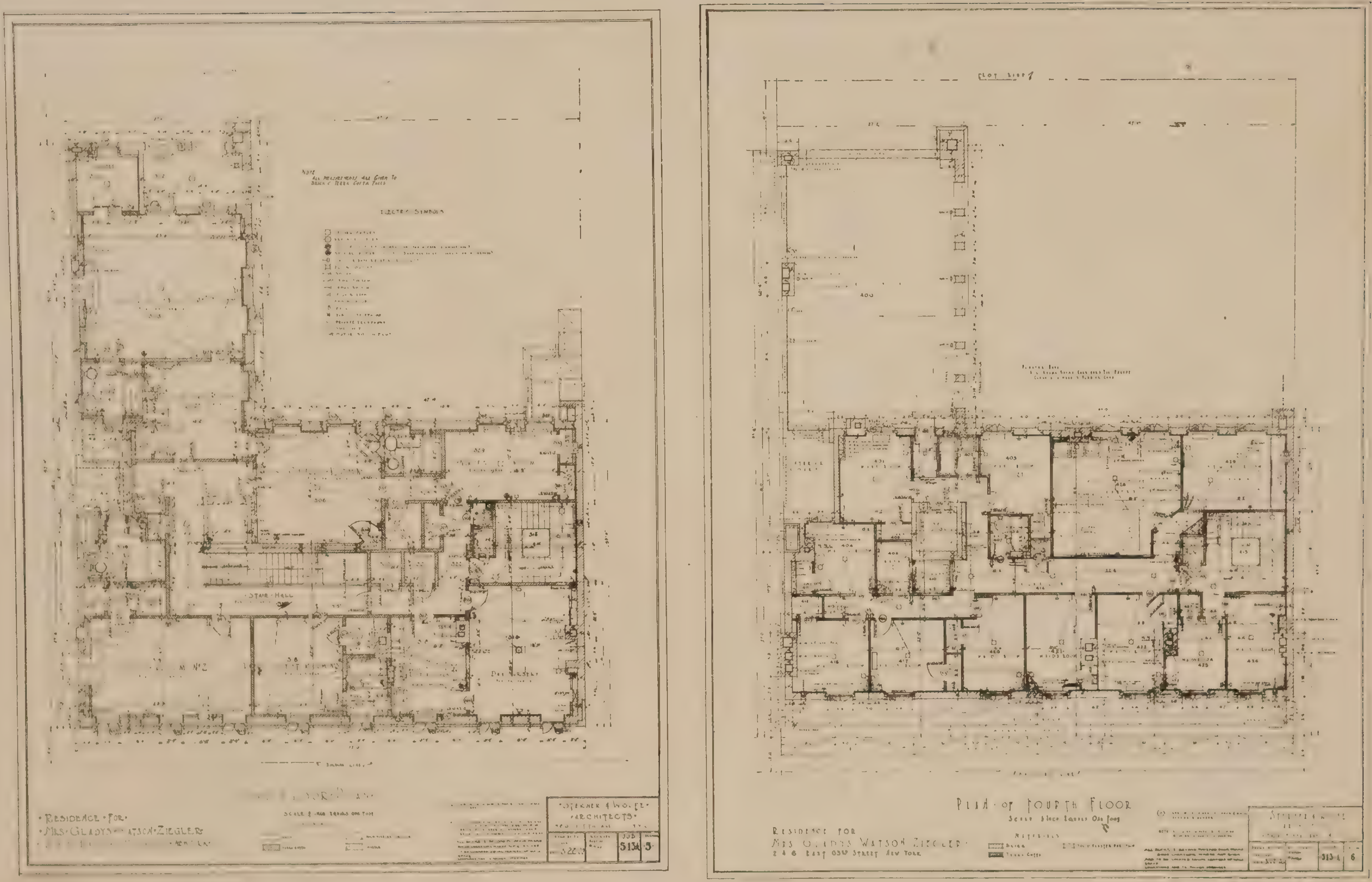


PLANS.

Sterner & Wolfe, Architects.

RESIDENCE, MRS. GLADYS WATSON ZIEGLER, 2 EAST 63D STREET, NEW YORK.



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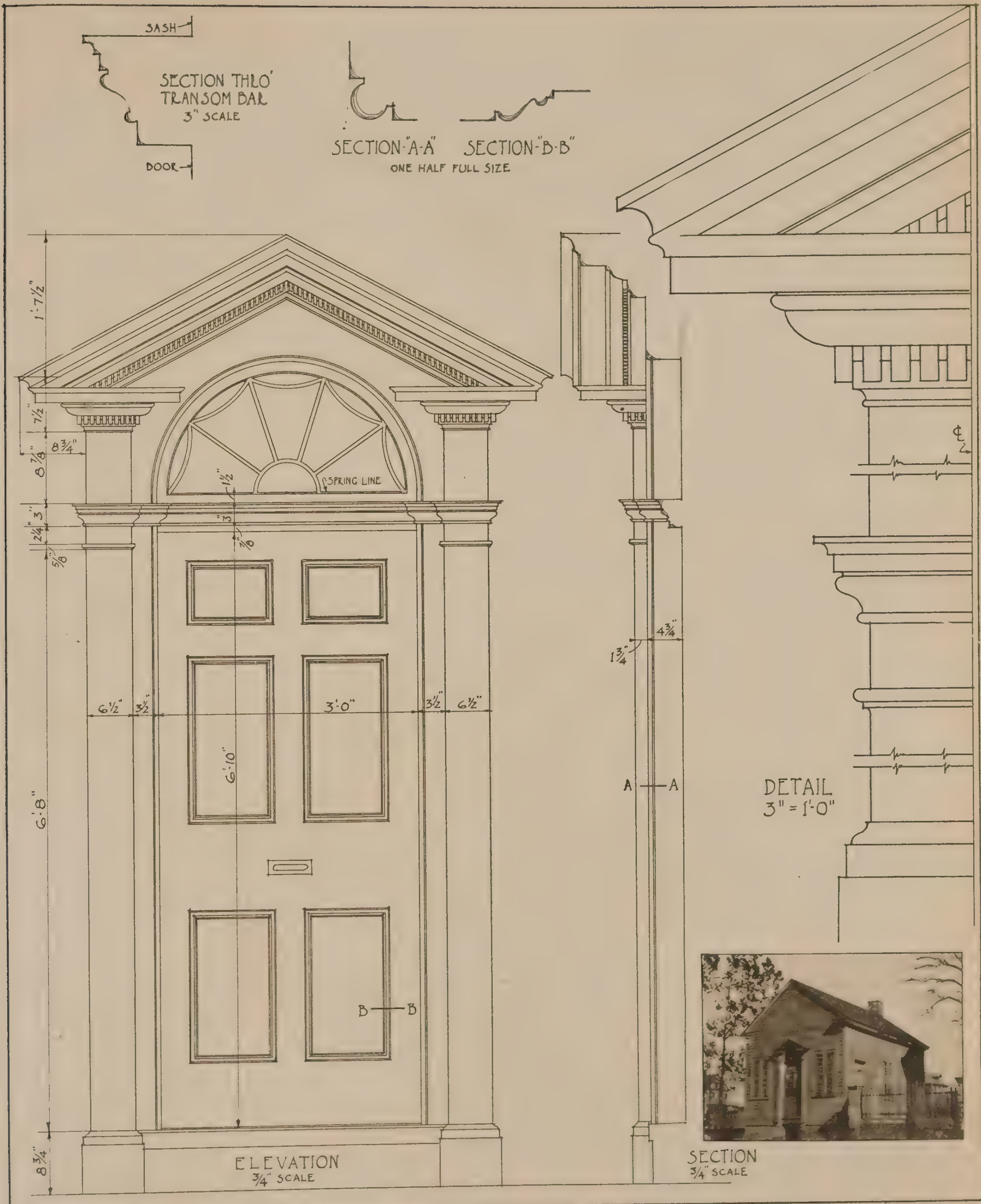
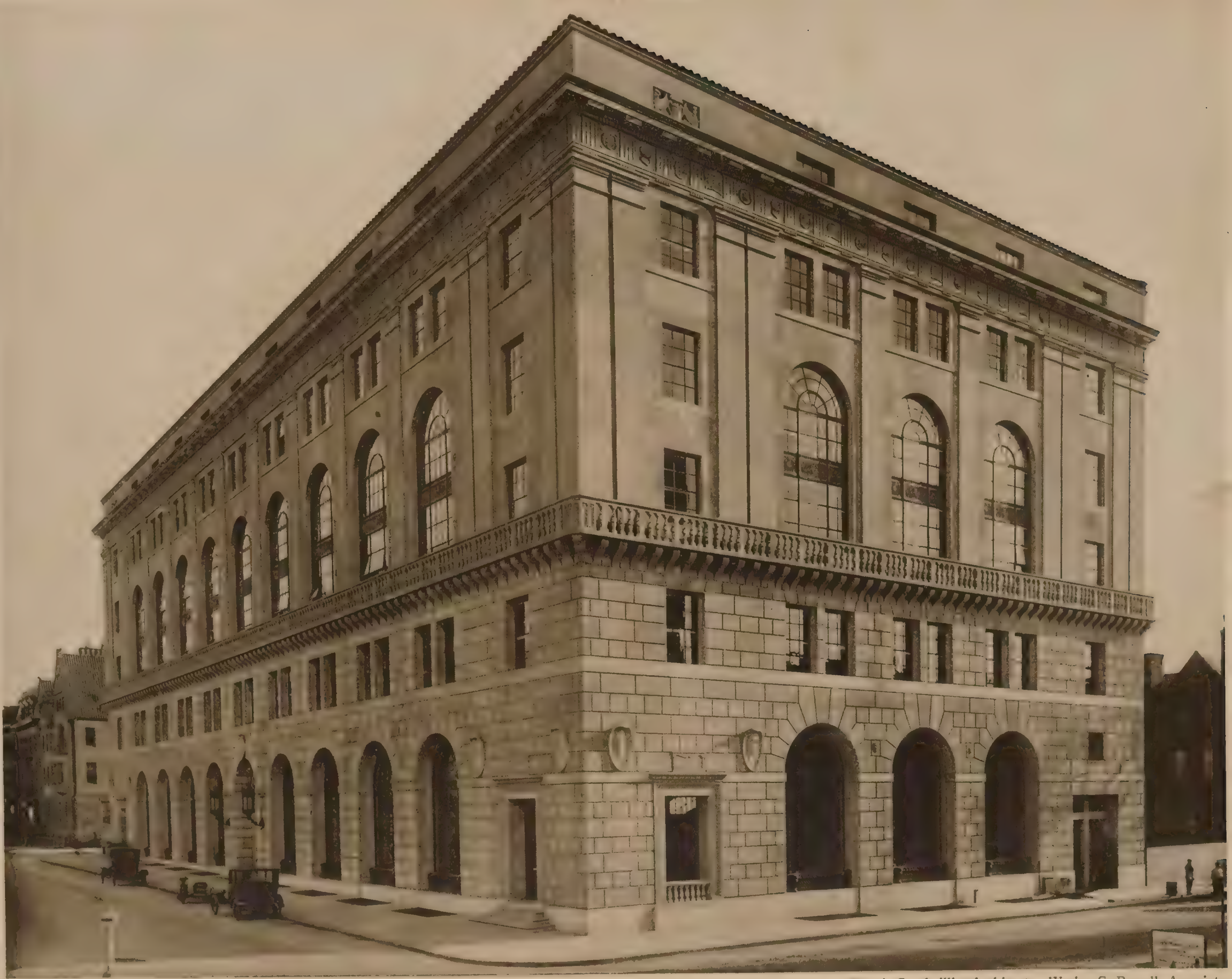
Sterner & Wolfe, Architects.



COLONIAL ARCHITECTURE
of the
CAROLINAS

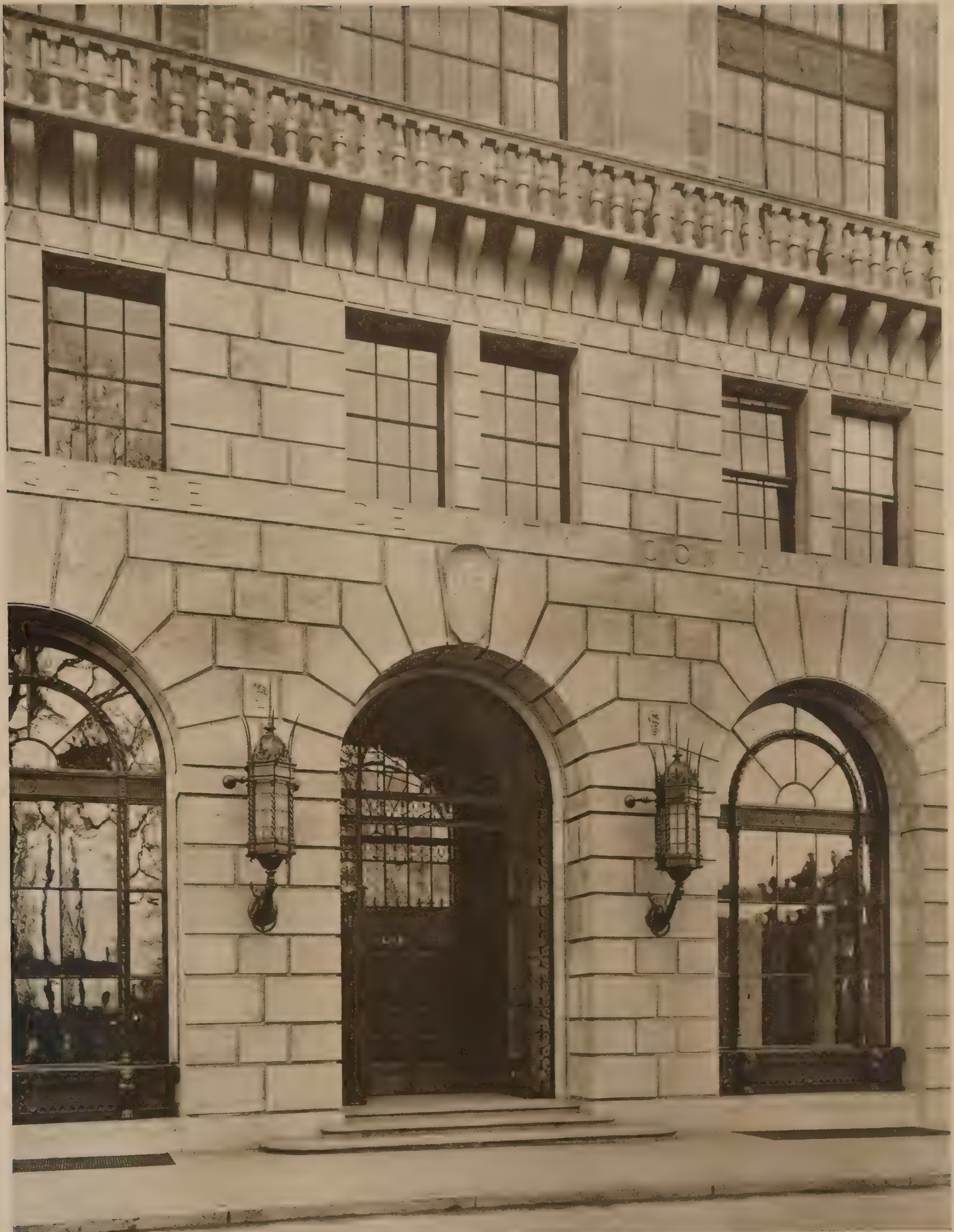
DOORWAY - JUDGE DONALD'S LAW-OFFICE
DATE-ABOUT-1790 165 CRAVEN ST., NEWBERN-N.C.

MEASURED & DRAWN
by
J.A. ALTSCHULER



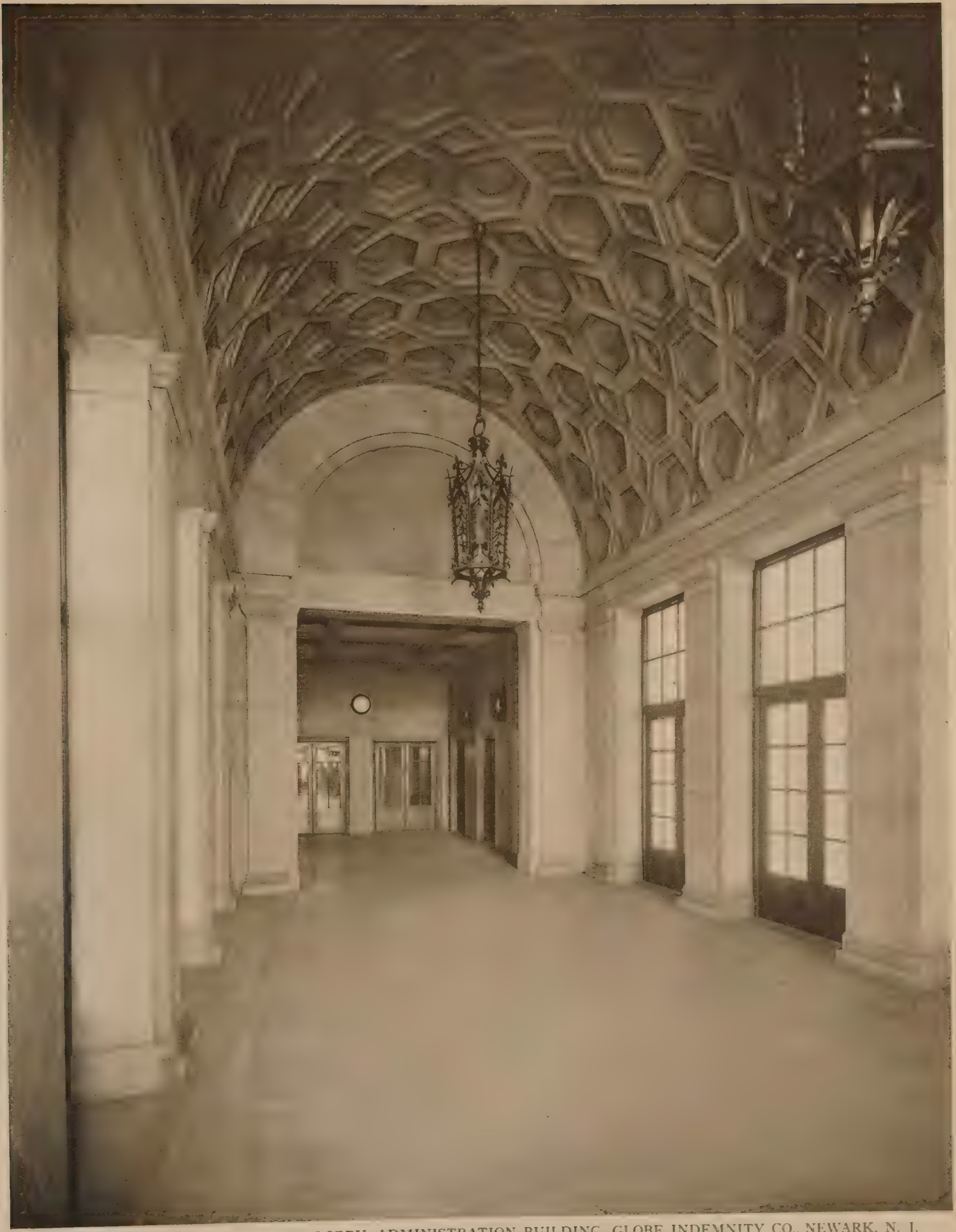
ADMINISTRATION BUILDING, THE GLOBE INDEMNITY CO., NEWARK, N. J.

Frank Goodwillie, Architect. Wesley S. Bessell, Associate.

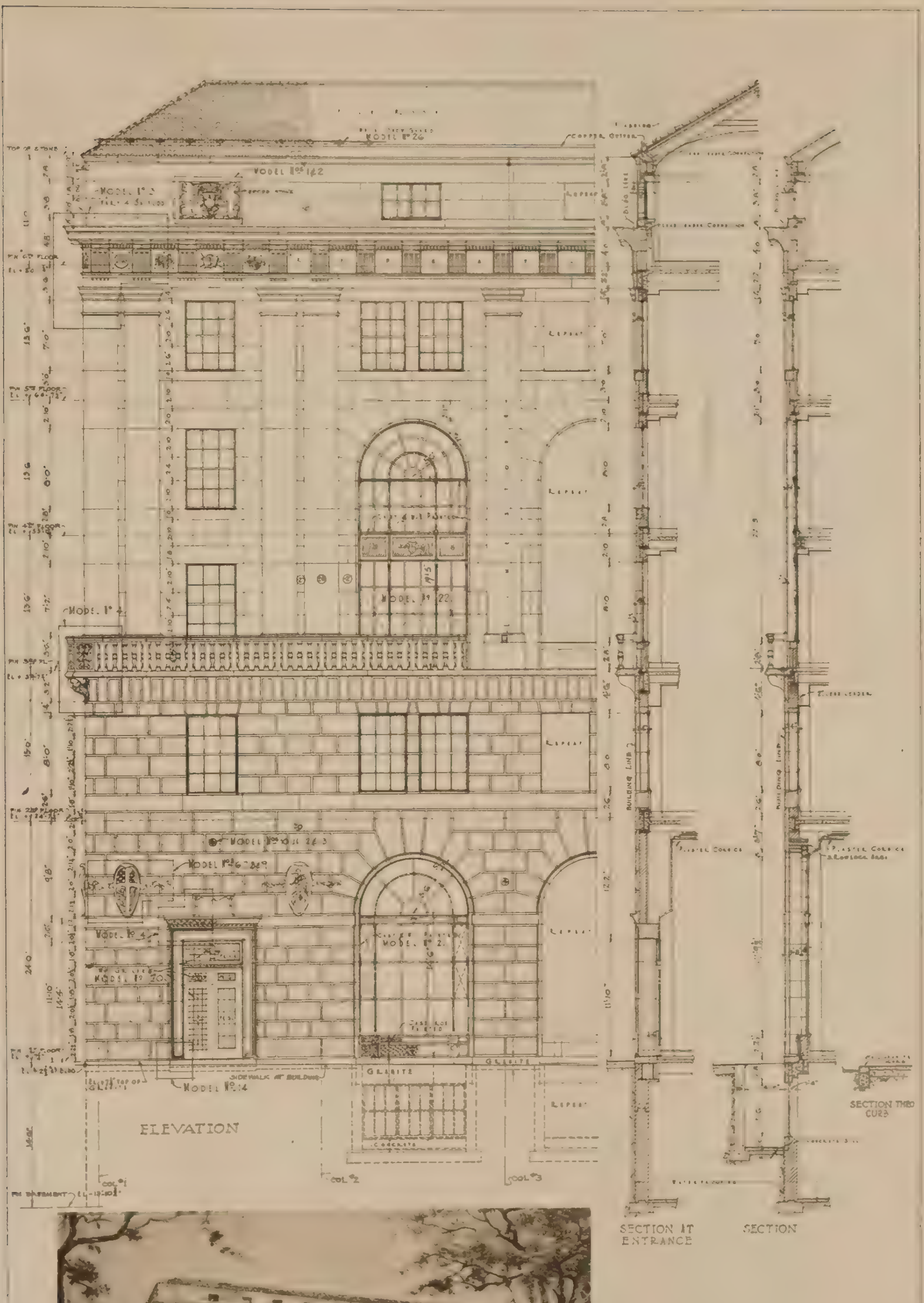


MAIN ENTRANCE, ADMINISTRATION BUILDING, GLOBE INDEMNITY CO., NEWARK, N J.

Frank Goodwillie, Architect. Wesley S. Bessell, Associate.

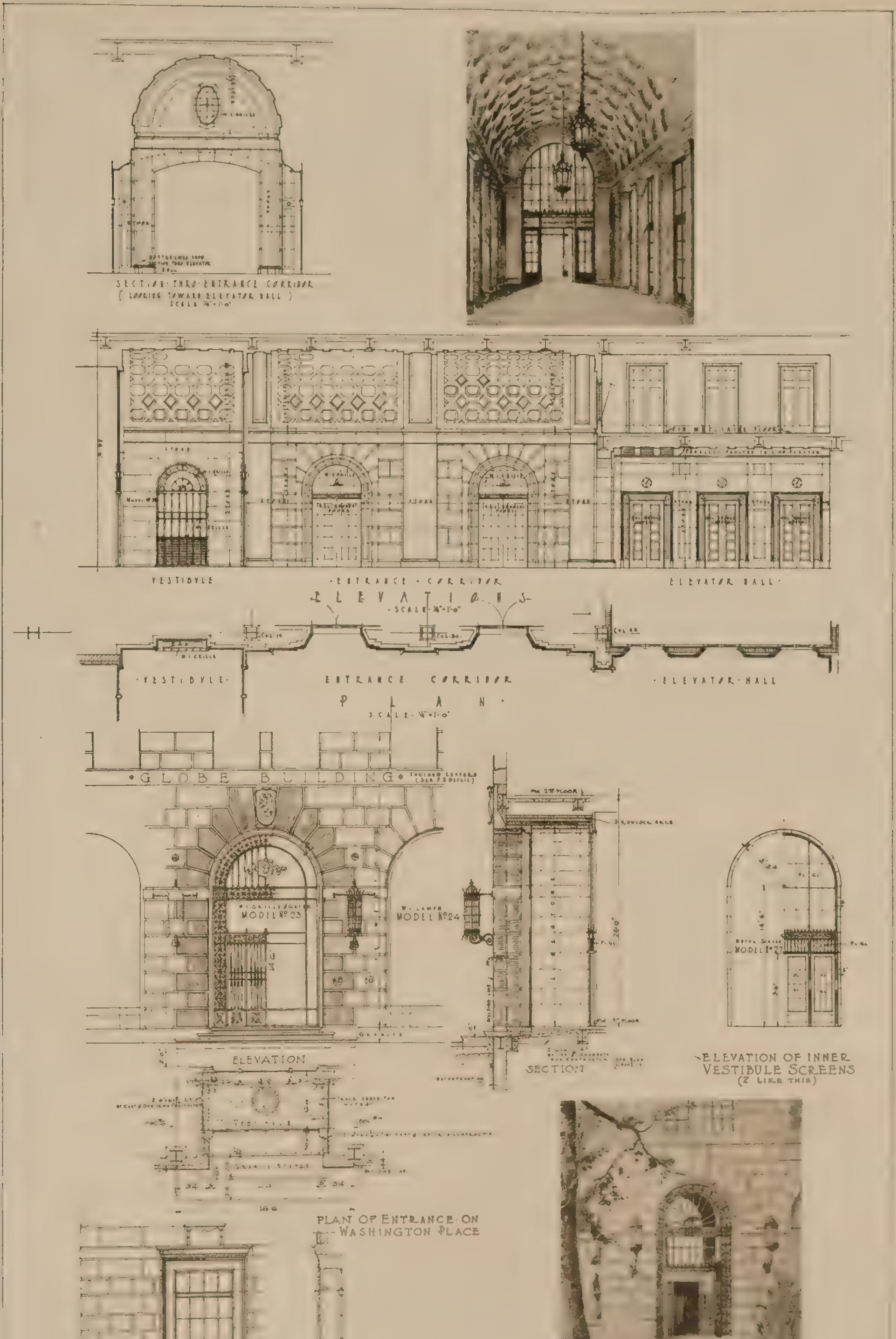


ENTRANCE-HALL AND ELEVATOR LOBBY, ADMINISTRATION BUILDING, GLOBE INDEMNITY CO., NEWARK, N. J.
Frank Goodwillie, Architect. Wesley S. Bessell, Associate.



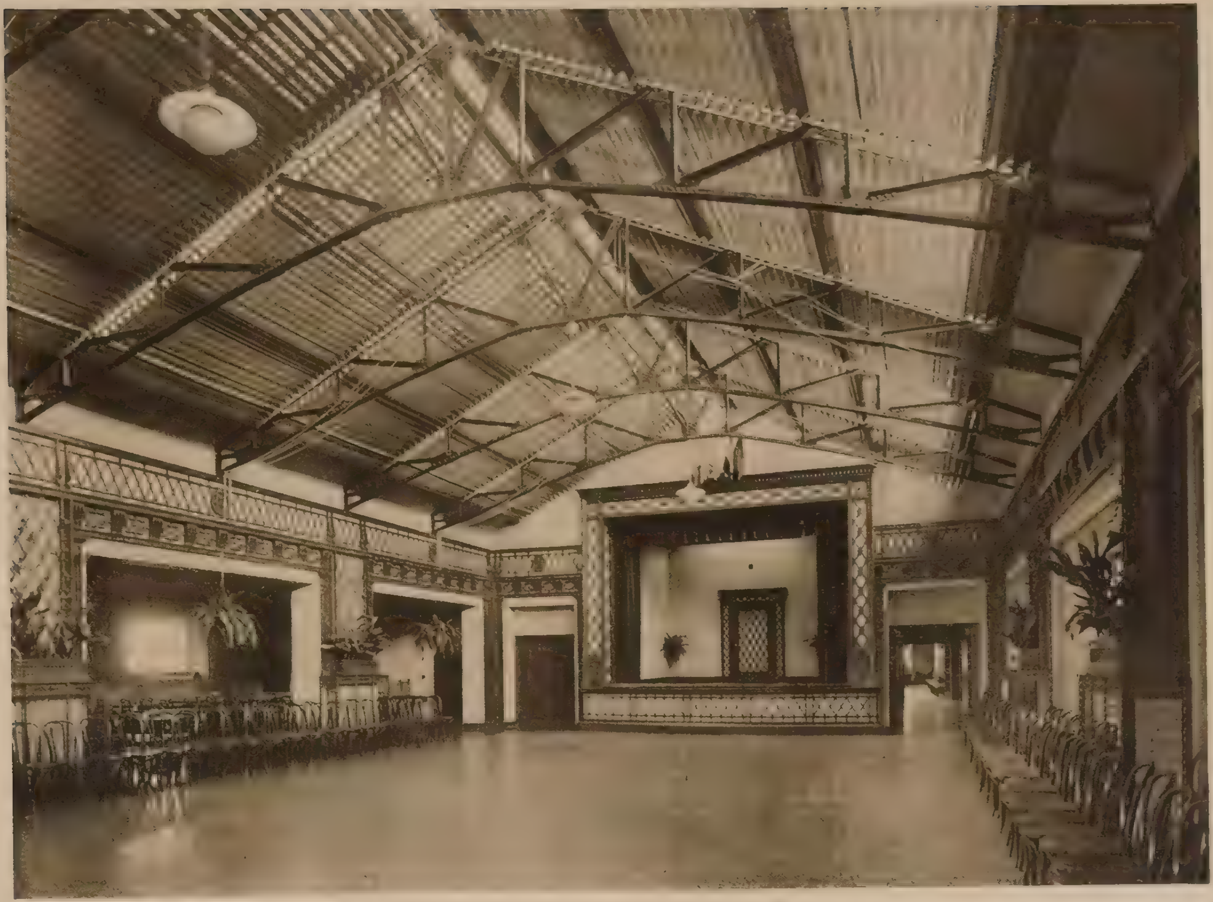
DETAIL SHEET, ADMINISTRATION BUILDING, GLOBE INDEMNITY CO., NEWARK, N. J.

Frank Goodwillie, Architect. Wesley S. Bessell, Associate.

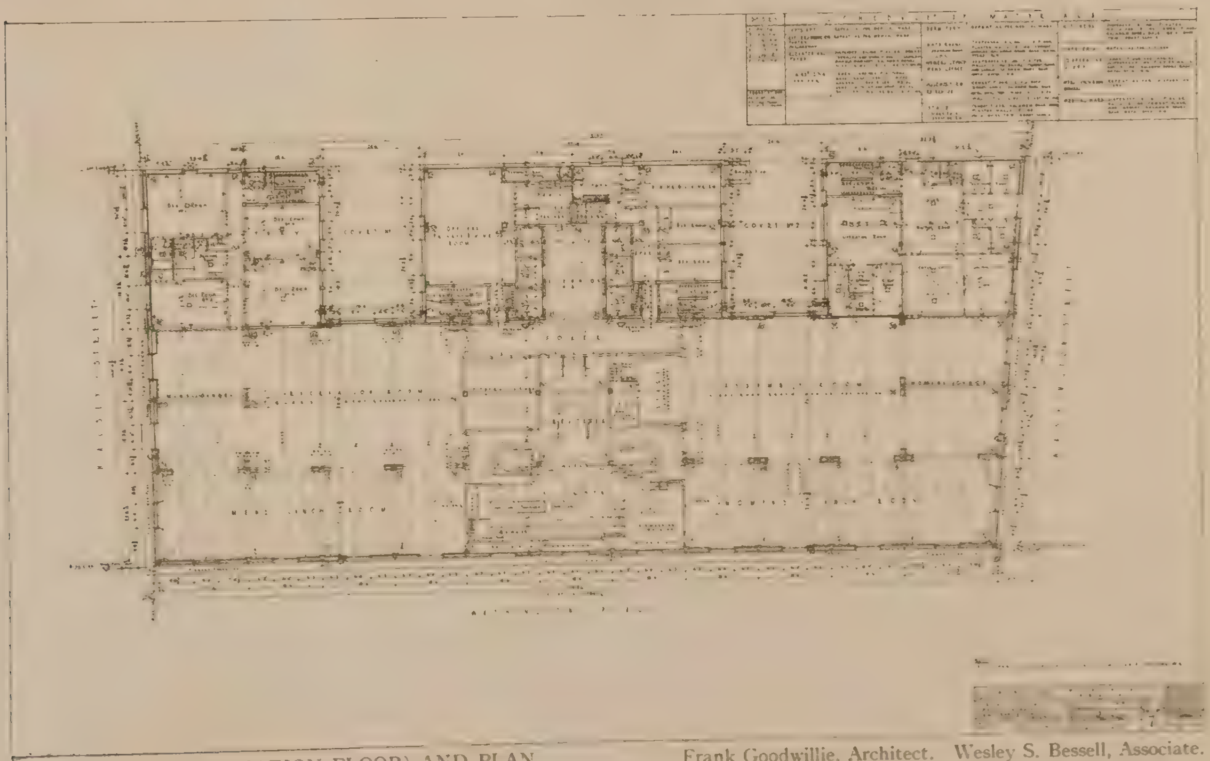


DETAIL SHEET, ADMINISTRATION BUILDING, GLOBE INDEMNITY CO., NEWARK, N. J.

Frank Goodwillie, Architect. Wesley S. Bessell, Associate.



AUDITORIUM, SIXTH FLOOR.



SIXTH FLOOR (RECREATION FLOOR) AND PLAN. Frank Goodwillie, Architect. Wesley S. Bessell, Associate.

ADMINISTRATION BUILDING, GLOBE INDEMNITY CO., NEWARK, N. J.

The New Administration Building for the Globe Indemnity Company at Newark, New Jersey

SOME one has truly said "big business men are learning that in building a business they are also building lives." "More and more attention is being paid to demands for perfection." "The ideal is always the most practical and most profitable." "An ideal is a perfected idea—an idea from which nothing need be taken away, and to which nothing can be added that will increase its value for the purpose for which it is created." Thus the dream of the president of the Globe Indemnity Company, which started life ten years ago in a twelve-by-eighteen-foot room in the crowded insurance section of down-town New York, has become his "perfected idea," "his ideal."

The personnel of the organization having grown during those ten years from two men to seven hundred men and women, it became necessary to provide a working-place where human energy could be conserved and directed; where the safety, as well as the mental and physical health, of the employees would be fully recognized, and where all influences that could possibly interfere with efficient work were non-existent. The ideal thus required a location away from the crowded and noisy city of New York, where one's home is at a great distance from one's place of business and where transportation is now almost impossible, to the more roomy and quiet city of Newark, where one's home in the near-by suburbs is close to one's place of business.

The site so well chosen to meet the above conditions occupies the entire block front facing Washington Park. The building, which is two hundred and twenty-five feet in length, thus has the greater number of windows with a steady north light, while the east and west windows in the side streets admit the cheery and health-giving sunlight, and so the employees, who spend the best part of the day in this building, enjoy light, sunshine, blue skies, green grass, and trees. Architecturally the building is in the style of the Italian Renaissance, is six stories in height above the street, and has a high, well-lighted basement below the street-level. The exterior has a granite base, with the upper portions in Indiana limestone, carefully selected for its color and texture, and carefully studied with reference to its finish. The building is symmetrical in plan about an axis running north and south, at right angles to the main façade and through the main-entrance corridors, at the south end of which are located the electric elevators, six in number, and running from the basement to the sixth floor.

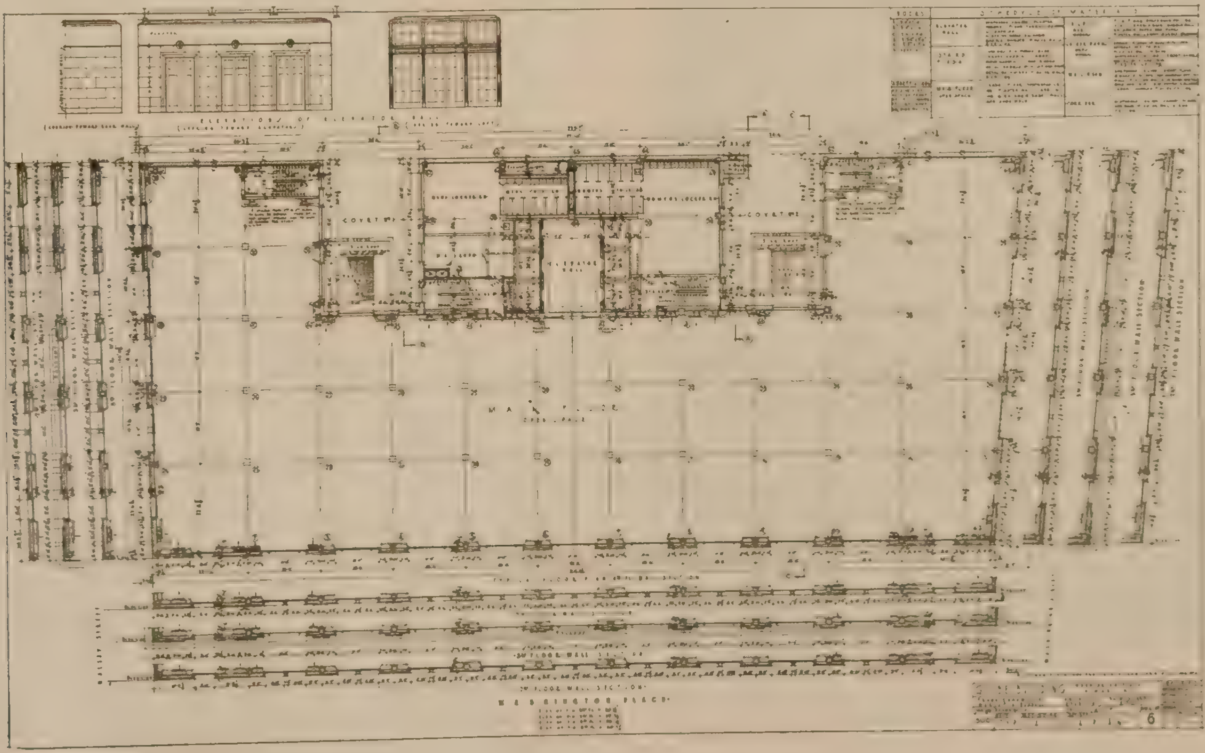
In the basement are located the file, printing, and stock rooms, the boiler, pump, fan, and refrigerating rooms, as well as the electric switchboard and transformer rooms, also a fully equipped butcher and vegetable shop where food is prepared daily for the kitchen on the sixth floor.

The first story, twenty-two feet in height (which allows for the introduction of mezzanine floors, when required), will be occupied later by the executive offices which are now temporarily located on the fifth floor.

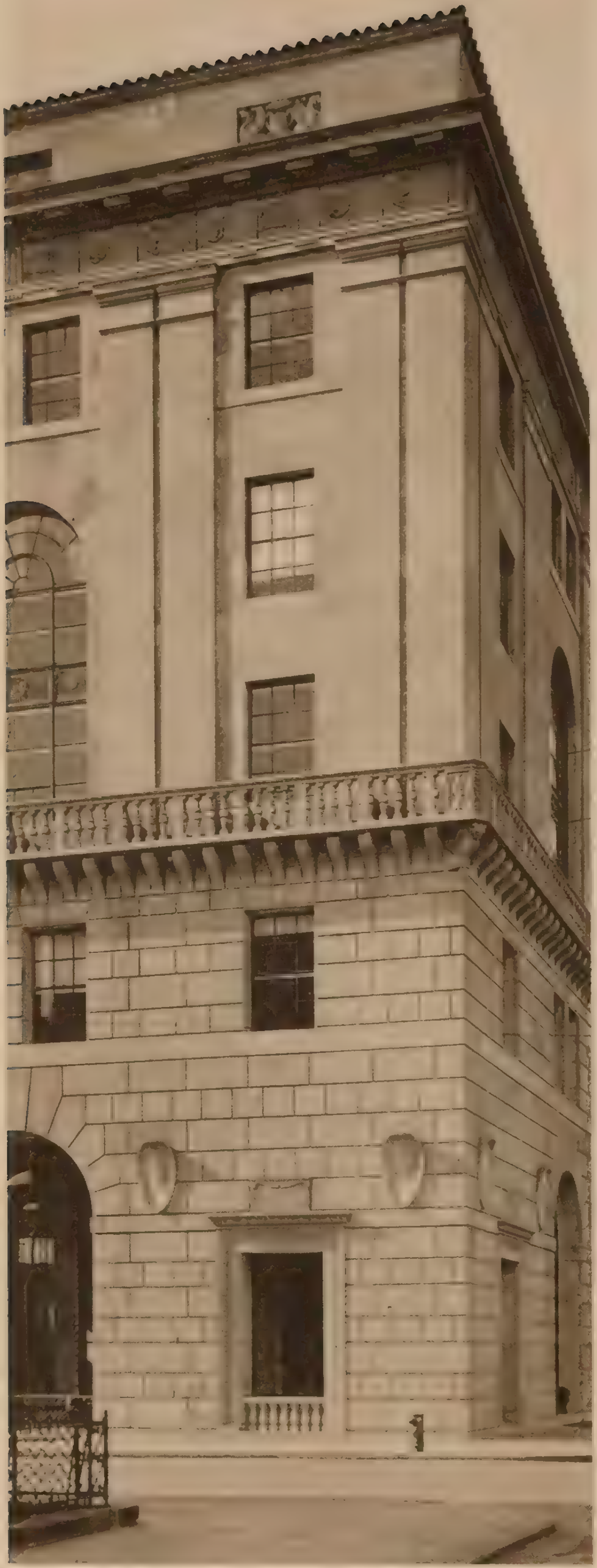
The second, third, and fourth floors are laid out in a one-office unit, except that the wings at the rear of the building are separated from the main rooms by sound-proof partitions, and in these wings are located the electrically driven adding, punching, and statistical machines, and the typewriting machines, thus keeping the usual noises away from the business office.

On the fifth floor are located the executive offices—five in number (which later will be moved to the first floor)—the balance of the space being occupied as a business office.

The sixth, or top, floor is devoted to the health and



Typical floor plan.



Corner detail, Administration Building, Globe Indemnity Co., Newark, N. J.
Frank Goodwillie, Architect Wesley S. Bessell, Associate.

recreation of the employees; as one enters from the elevator hall you find the cafeteria, one side for men and the other for women, while beyond is the kitchen. Leading from the cafeteria, on either end of the building and at the front, are the lunch-rooms for men and women employees; adjoining each of these lunch-rooms are the recreation-rooms—one for men and the other for women. The women's recreation-room is fitted with a complete stage at one end, and is used as an auditorium, seating approximately six hundred and fifty persons. This room is also equipped with a moving-picture apparatus. There is also a private dining-room for the officers of the company, their guests, and visiting agents.

In one rear wing is located a number of bedrooms, affording accommodations for visiting agents, while in the other wing of the building is a medical and surgical ward, containing rest-rooms for the staff and fully equipped with modern appliances to care for all medical and surgical needs. There is also on this floor a five-room apartment for the superintendent of the building.

The building is lighted by electricity, using a semi-reflecting type of fixture, the walls and ceilings being specially painted to reflect the light but without eye-strain.

The building is heated by a low-pressure vacuum system, using the exhaust steam from the engines which drive the ventilating fans and refrigerating plant for this purpose. All direct radiation, which is placed under each window, is automatically controlled by thermostat.

A complete ventilating system provides fifty cubic feet of fresh, water-washed and warmed, air per minute to each employee.

Locker and wash rooms are provided on each floor, centrally located. All office floors throughout are covered with compressed-cork tile, thus reducing all noise to a minimum.

Each floor is provided with drinking-fountains supplied with ice-water.

A complete refrigerating plant in the basement not only makes ice for table use but supplies the refrigerators in the butcher-shop, cafeteria, and kitchen, as well as delivering iced water to the drinking-fountains.

Opportunity for the Young Architect

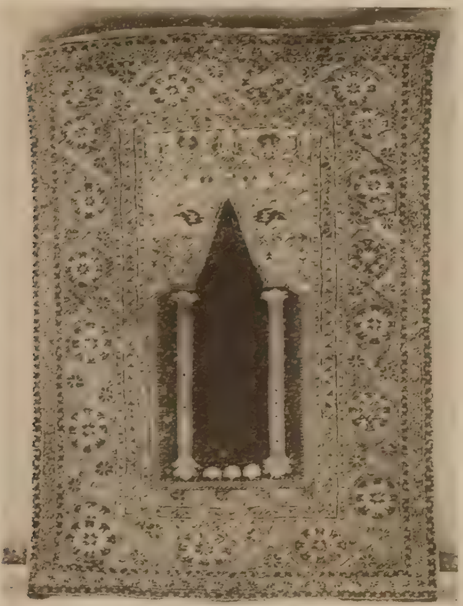
THE "Own Your Own Home" expositions should be of especial interest and value for the younger men of the profession, and we note with pleasure the names of several of the well-known young architects among the prize-winners of the recent competitions open to architects all over the country. The competitions in small-house designs have brought forth some interesting examples, and the prize plans are to be sold, with compensation made to the designers for every reproduction. The small house offers an exceptional opportunity for the young architect to show good taste, combined with practical knowledge, and the standards set by these competitions may in time have much to do with the general improvement in our suburban architecture—"a consummation devoutly to be wished." We hope to see that one result of these competitions will be to teach the man in the street to realize that it is to the architect and not to the builder that he must go for good design in small-house construction. A man of training can show his quality as much in a small-house design as in a pretentious dwelling, in fact, his task is often a much harder one.

Oriental Rugs of To-day

By Samuel R. T. Very, Architect

With illustrations of Rugs from Examples in the Metropolitan Museum of Art, New York

ORIENTAL rugs of to-day are not necessarily modern, but neither are antique rugs necessarily ancient. There is a lot of misunderstanding about that. The term "modern" has multifarious meanings. When applied to history, it means that considerable period following the Middle Ages; when applied to plumbing, it means a few decades; when applied to Oriental rugs, it has a variable meaning, but usually about sixty years, the whole period following the adoption of the use of coal-tar dyes by the Oriental rug-weavers.



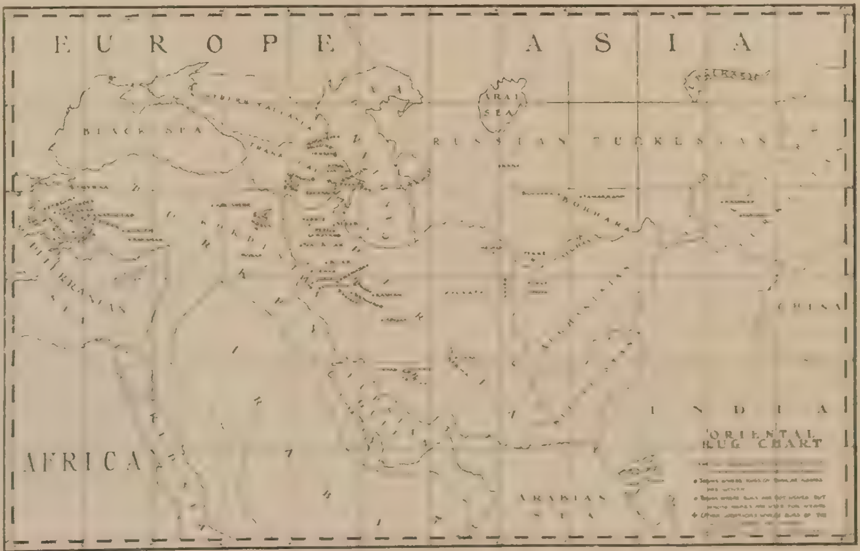
Turkish Ghiordes eighteenth-century prayer rug. Fletcher Collection.

But there are many other factors than dyes which distinguish modern from antique rugs. Influences of travel, conquest, and immigration long ago dissipated the characteristics of weaving, and intermingled the originally distinctive design patterns. Some ancient Oriental rug-making districts have become extinct; others have adopted exotic patterns; still others have been exploited by European capital, and they now weave inferior qualities of rugs, in part by machinery, with piles dyed in fugitive colors. So I do not refer altogether to rug-patterns when I refer to Oriental rugs of to-day. I refer to a multifarious market of antiques, of moderns, made in the Oriental rug-weaving countries and available for sale in the United States.

The divisions of science and art which enter into a complete history of rug origins, materials, weave patterns, dyes, trade names, symbolism, and market values are highly specialized studies. Popular books upon such a technical subject are frequently misleading, and statements in them are sometimes regrettably inaccurate. Dealers are often astonishingly ignorant of elementary facts in the study. Public sources for research are pathetically scarce, and are nearly all uniformly ill-equipped to be helpful.

Charles Darwin spent a lifetime in research before he dared state his conclusions about one of the simplest varieties of pigeons. Darwin was a meticulous investigator, an accurate observer, a cautious and erudite scholar. His evidence was authentic, unquestionable. He was studying a subject popularized for centuries, a variety of bird bred by fanciers of the sport since the beginning of history. Pedigrees were comparatively easy to establish. Records were continuous. Historic allusions were prolific. How then can an art so intricate, so unpopularized, involving many lost sciences, hardly alluded to in contemporary literature, be easily appreciated in its entirety by the amateur writers of to-day who have had almost nothing to guide them except a few statements almost universally written by authorities living to-day, and who are often inspired by fancy, or are misled by "experts" who have an utter disregard for fidelity.

At present there is an import duty of 50 per cent ad valorem on Oriental rugs, but a generation ago they were imported into this country duty free, and many good antiques reached even modest homes, which to-day cannot afford to own them. Some of those pieces are still being released to the trade for re-sale and occasionally to-day can be picked up by lucky buyers at many times their original cost. But genuine antiques are rare, and being much sought after, modern imitations have crept into the market—pieces woven with much of the spirit of their prototypes, and so cleverly treated by chemical and physical means as to make them acceptable to the unsophisticated collector. Dealers have grown diabolical in their cunning and trickery to "antique" their modern weaves. There is as much humbuggery in rugs as there is in antique furniture, but there is



Persian (about 1500). Altman Collection.

so much ignorance of even elementary tricks in this practice that victims are legion.

To-day so-called Oriental rugs, except two principal classes, are those woven in the modern countries of Persia and its contiguous lands, a territory whose area is approximately equivalent to that of the forty-eight States of the United States of America. The exceptions are geniune Chinese rugs and genuine Indian rugs. I say "genuine," for by far the greatest class of commercial weaves manufactured to-day are so-called Indian and Chinese rugs manufactured partly by machinery under European direction.

The Persians learned the art of rug-weaving from the Babylonians many centuries before the Christian era, and ever since then Persia has been pre-eminently the greatest Oriental rug-making country in the world.

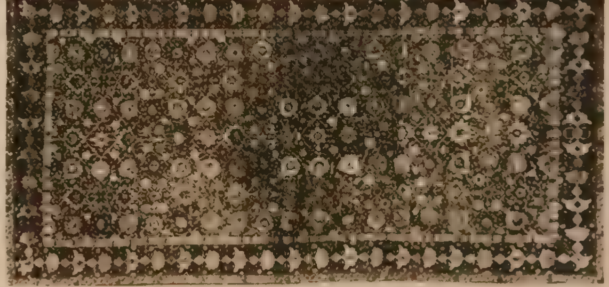
As we know them in the modern market, Oriental rugs are principally of wool, goat's hair, camel's hair, cotton, and silk; but linen, hemp, jute, and other materials are often used, especially in inferior weaves. These materials are woven into the fabrics in three varieties of texture: the so-called "Khilim," "Cashmere," and "pile" weavings. The Khilim and the so-called Cashmere weaves* have no pile, and obtain their design by a variation of the warp and weft threads.

Oriental rugs are woven upon a hand-loom or frame, roughly described as follows: a wooden cross-beam, longer than the finished width of the rug to be woven, is supported in a horizontal position near to the floor in a wooden frame of two uprights, one at each end. Another wooden cross-beam, parallel to the first, makes the fourth side of the frame. Braces, legs, and mechanical adjustments, not materially affecting the art, complete the loom. It is the same to-day as it was in the time of the Shah Jehan. In a vertical direction, from upper to lower cross-beams, are tightly stretched the threads which are called the warp threads. They vary in size, spacing, and materials according to the type of rug to be made, seldom less than fourteen to the inch, or more than eighty. In the pile rugs they are rarely dyed, except at their ends, and then only to give color to the selvedge or finished webbing.

As the majority of Oriental rugs have wool naps, and as the antiques and the moderns were made similarly, a description of the mechanical processes and human operations accomplishing the manufacture of a hand-made, wool-pile rug explains some of the misunderstanding of the art, and discloses at once why antiques are more valuable than moderns, why certain materials are always associated with certain rug classes, why most trade names have sprung up, and why symbolism has lost its former importance. But statements like these should be made with the greatest caution; they can be readily misunderstood. A worn-out antique, badly torn, frayed, and moth-eaten, is not so valuable as a good, well-made, exquisitely designed, vegetable-dyed modern; rug classes cannot be instantly determined with accuracy by a cursory examination of the materials used; many trade names have nothing whatever to do with the processes of manufacture; and symbolism in rugs means what it always did when attention is paid to it *in the weaving*, only, like the signs of the zodiac, the original symbols are to-day rarely ever thought about or used.

In the days of the antique, long before the weaver could sit cross-legged at the loom, and daily tie three thousand knots of yarn to begin a rug design, there had been already accomplished many patient processes in the manufacture. The wool yarn had been dyed, the undyed yarn had been first spun from wool, the unspun wool had been washed and beaten and prepared for the elaborate processes of dyeing, the wool itself had been clipped from roving animals raised for that purpose for many generations, the dyes had been extracted, aged, and refined from a multitude of vegetable, animal, and mineral sources. None of these processes was an exact science; naturally, then, the human element entered largely into the success of yarn preparation. Whole families were trained from early childhood to prepare it. Children, grandchildren, and great-grandchildren performed identical operations in identical ways, without the least variation, for centuries. They lived in a single community. The wool-bearing animals were indigenous. The mordants and the kermes, buckthorn berries, and indigo, which furnished some of their basic dyes, were gathered at precisely the same state of maturity annually and were extracted and fermented in monotonous repetition. The climatic conditions, the nature of the vegetation, the character of the wool, the habits and traditions of the people engaged in a single rug-weaving district were all special and individual and different from those of any other district. Thus it was that the antiques woven in one district were always characteristic of that locality, and could not be reproduced in any other. Too great emphasis cannot be given to the individuality of the dye-pot uses.

But the dye-pot was only one step of many in the manufacture of an antique rug. The method of the weave was equally individual in each rug-weaving community—a community of related families performing traditional operations in a standard method. If cotton was once the material of the warp threads, cotton remained that material forever. If strong reds and blues and greens and black and white were once the only color shades, they remained so, and they



Persian Herat. Seventeenth century. (So-called Ispahan.) Altman Collection.

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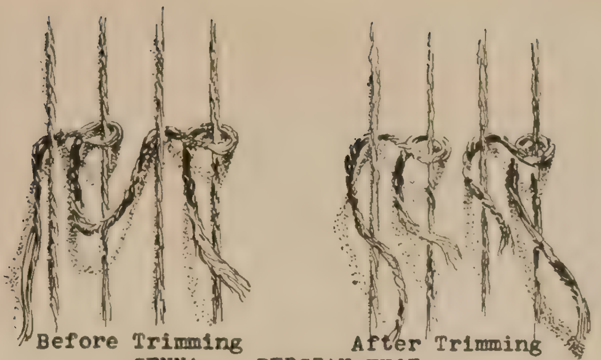
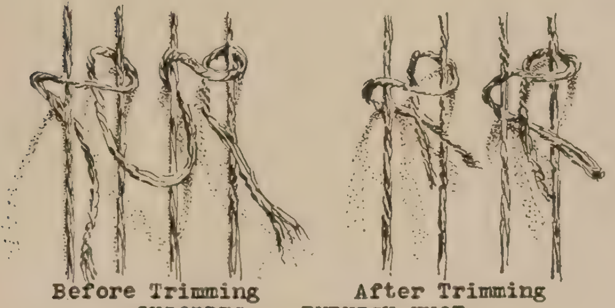
*The term "Cashmere" is a misnomer; it should be Soumak.



SENNA or PERSIAN KNOT.



GHIORDES or TURKISH KNOT.

were arranged in identical juxtaposition forever. If the senna knot was once tied, it was always tied. The great-grandson of a traveller who had once picked up a pattern he fancied, could duplicate the pattern in the same community but could find it nowhere else. When the Occidental trade in Oriental rugs began, the names of the districts were infallibly exact in designating characteristically individual weaves. But, oddly enough, the resulting trade names were sometimes gross misnomers, as wrong as the popular trade name "hyposulphite of soda," which is chemically very different from its name. For example, the trade name "Ispahan" gives a very precise and beautiful implication to the mind of a rug collector. To a dealer it describes a rug type worth as high as five hundred and fifty dollars per square foot; but these remarkably beautiful rugs were never woven in Ispahan. Indeed, it is a curious fact that the ancient rug names were invariably derived from the modern rug districts, and thus those districts which first released to the trade the only examples of extinct weaves gave their names to the unknown weaves there found. Frequently it is impossible to name with certainty the town or community originating a special type of antique rug; the name of the province or tribe is often as close as possible, and a latitude of at least fifty years must usually be allowed for the age.

The original symbolism of the antique is to-day pretty well lost in modern Oriental rugs. There are many reasons for this. In the first place, the symbolism was a slow outgrowth of the natural restriction of certain colors to certain districts, the rarest colors being reserved for the finest rugs, the finest rugs being reserved for religious uses, and religious fanaticism thereupon ascribing certain mystical meanings to the colors. The symbolism was also due to the traditional conventionalism of various rug types, of design units, and of color, and fashion had a lot to do with it, just as it has to-day. For example, purple is a regal color; it has been associated with royalty since the Phœnicians boiled it from purpura murex; but modern kings do not wear purple silk hats because it is not the fashion. But the scope of the original symbolism of antiques was as nothing to the poetic fancy of a modern Armenian rug dealer. It is obvious that with the great lessening in modern Oriental fanaticism the modern abundance and wealth of color range since the introduction of coal-tar dyes as compared with the original limitations in antique dyes, and since the disappearance of all clues to the origin of much of the original symbolism through the extinction of the families controlling the unrecorded secrets, or from other sufficient causes, added to the fraud of the many unscrupulous and ignorant dealers, as well as the eager gullibility of rug buyers, rug symbolism is no longer an exact science, even if it ever was.

I have marvelled at the naïve gullibility of many otherwise intelligent rug owners who have shown me their often commonplace rugs and quoted wandering, ignorant Syrians or imaginative Armenian rug dealers to establish the alleged date, place, and name of the weave and weaver, and who have developed whole novels out of a picture of a horse woven in with very little or no artistic merit and certainly less symbolic intent. I have never met any one who knew anything about rugs who has seen the date or place of manufacture, or the weaver's name in any genuine antique, or read of any authentic instance of such records, although, of course, many modern "doctored" pieces contain dates purporting to be the year of manufacture according to the Mussulman calendar. Antiques and moderns alike frequently contain inscriptions, but they have nothing to do with symbolism.

With the exception of the rugs woven in part by machinery, as, for example, a great many "Indian" rugs reaching the United States, all of the Oriental pile rugs of to-day are made in precisely the same way. The weaver sits at the loom which has been already described, as primitive to-day as it was centuries ago. The pile yarn, already dyed, is cut in a short piece and tied around the warp threads four at a time, in one of two different characteristic ways—invariably called "knots" by rug writers—the Ghiordes knot and the Senna knot. "Loops" would be a better description, for the knots are retained in place merely by the tightness of the weave, the pressing of other "knots" against them, the spreading of the wool yarn at the free ends, after cutting, and the interlacing of successive rows of weft threads, after successive rows of pile loops. The weft weave is pressed tightly down to the pile threads by an instrument called a "comb." This is many-pronged, long-toothed, and designed to penetrate the interstices of the warp threads and press down the yarn. It is not at all like a hair comb; it is more like the base of a barber's clipper; indeed, I have seen such an instrument used for the purpose, but the fanciful writers of Oriental rugs sometimes affect to see a mysterious symbolism of obscure and poetic origin in the primitive pictures of this "comb" woven into some of the antique weaves and many of the moderns. " 'Cleanliness,' " they write, " 'is next to Godliness,' thus saith the Koran; hence the origin of the comb unit in many rug designs." Unskilful pressing down of the weft or cross-threads produces unevenness or irregularity in the finished specimen. There is no greater fallacy than the popular belief that such unevenness in rugs is a valuable characteristic. But I have heard dealers go so far as to point out unevenness as an especial element of extraordinary value in bad specimens of common types of modern rugs.

The rug design in pile rugs is obtained by varying the colors of the pile, or nap, or loop yarn used to tie the different knots, except at the selvage, where the warp and weft threads themselves are colored and woven into designs, as in the case of the Khilim rugs. The design in "Cashmere" types is obtained by the stitch-yarn colors, as well as by the body weave. A chart, called a "talim," is placed in front of the weavers. This is a small portion of a finished rug similar to the part being woven. This chart is accurately tied, with just the right number of knots, each colored properly. A high degree of skill is required to follow one of these charts, for it is no uncommon pattern which has five hundred knots to each square inch (coarse patterns have eighty), and in some of the finest weaves there are a full thousand. Modern rug factories utilize unskilled weavers by giving the talim to a supervisor who, seated in front of several weavers, drones out the weave instructions, knot by knot. A really skilful weaver can tie from four to six knots a minute, which amounts to from six square inches of a fine weave up to fifty square inches of a coarse weave of rug per day.

At the modern loom are seated those wretched pariahs who toil from the age of four or five years old, from sunrise to sunset, week after week, usually unpaid for the first two years, and thereafter paid but a pittance. The weavers are usually girls and women. They work independently at different looms upon the smaller rugs, and jointly as many as six together, upon the wider pieces. Rugs woven in the United States, by hand, in a similar way, would cost to-day at modern wages approximately twenty-five to fifty times the current costs of even the better classes of imported Oriental rugs. In the latter half of 1917 undyed woollen yarn sold in New York for as much per pound as I have sometimes paid per pound for a very good quality of hand-tied, vegetable-dyed, antique Karabagh type of imported Oriental rug.

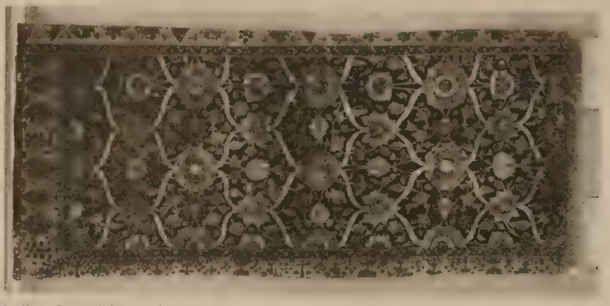
Animal design on dark-red wool. Indian. Late sixteenth-seventeenth century.

After two rows of the knots are tied and fastened by the weft threads in most weaves of pile rugs, the loose, more or less uneven ends of the yarn, and the middle bight between each double pair of warp threads, are cut off with scissors to the intended length of pile in the finished rug. This cutting is always very difficult; the greatest skill is required in short-nap rugs like the Senna. It is impossible to wait until the whole rug is finished to do this cutting, although statements to that effect can be found in print. Moreover, modern pieces are not trimmed differently in that respect from antiques; scissors, not knives, are used to trim the pile.

The designs themselves, the rug patterns, have well been called the "souls" of the Oriental weavers, for the best antique designs have lived and increased in beauty in the ages since their originators died. Unfortunately, to-day in the modern market but few of the original design types have survived to the trade, but once in a while one can still stumble across a household containing a forgotten specimen. Indeed, through the commercialism of the industry, through the extinction of many of the original rug-weaving districts, through the corruption of pattern individuality by exotic influence, the number of original design types in all the Oriental rug-weaving countries known to the local trade has dwindled to less than sixty patterns, of which about thirty types are Persian. But numerous arrangements of designs and color units permit an almost limitless multiplication. There are innumerable unlike rugs in the markets of to-day. Occidental exploitation of the manufacture has even introduced western motifs into Turkey and India especially, and some of their products (not by any means all) are more vicious to the eye than even their domestic prototypes.

The use of coal-tar dyes has revolutionized the industry. Many gradients and shades and color mixtures immediately became possible, hitherto unfound in rug-yarn colors. The laborious and difficult processes of dye extraction, treasured in secret by generations of the Oriental dyers, were pretty generally discarded for the quicker, surer, cheaper European product of the organic chemist. Drastic local laws were no preventive. Years ago the Shah of Persia proclaimed an edict forbidding the employment of aniline dyes for weaving purposes throughout the kingdom, with the stipulation that violators should have their right hands cut off. Judging from the Persian rugs imported to-day, the law has been universally evaded. There has been much nonsense stated and written about the fugitive quality of aniline dyes. Coal-tar dyes are or can be as fast as vegetable dyes, faster in some respects. Some coal-tar dyes are fast; some are not. Some are fast to washing in cold water, some to washing in hot water, some to daylight, some to artificial light, some to heat, some to pure soaps, some to impure soaps, some to all these actions and many more; but none are fast to sunlight in the absolute sense. But just there is where there is the greatest misunderstanding; the ancient dyes from vegetable, mineral, and insect origins as known and used in Oriental rug-making are no faster to sunlight than are the best grades of modern coal-tar dyes. Moreover, some of the dyes were not fast in the sense that the wool appeared the same forever. I have many times seen artificial blacks gone utterly, so that the antique specimen looked moth-eaten in those places where black nap was used. Cheap, fugitive coal-tar dyes, however, have often been palmed off upon the unsuspecting Oriental weaver, and it is not at all uncommon to find in the modern market rugs whose whole designs are different than when finished, through the fading or changing of the colors. Yarn dyed with some inferior coal-tar products sometimes fades to an actually different color; it is frequently possible to examine the roots of an inferior pile rug and find quite different colors than those exposed to light. But it must not be misunderstood that fading, as is generally supposed, is detrimental to a rug; there is not an antique in existence whose value has not increased through the fading of the originally garish colors. Fading is essential in rugs dyed from the ancient dyes, to secure the desired color harmony; but fading is undesirable in any rug when, as is commonly done to-day, it is accomplished artificially, through the use of acids which destroy the "life" of the yarn; and fading is usually undesirable in rugs dyed with coal-tar colors.

In an article as brief as this it is impossible to explain the characteristics of the rug types handled by the trade to-day. Indeed, it is a meticulous investigation, often fruitless, to classify with certainty some of the rugs of modern manufacture; and it is much more difficult to determine the age or district of manufacture of many of the older pieces. Authorities greatly disagree. Proofs are not so readily obtainable as in the identification of old paintings. There are hundreds and thousands of unlike rugs in the modern market, but there are only about fifty different rug varieties, called by a multitude of different names. One of these names is "Iran." It is a name frequently used by modern market rug dealers, especially Armenians. It seems to be applied to rugs of both the Ghiordes and the Senna knot and to rugs of every sort of design and pattern weave. It sounds well to a buyer; it is very strange, very foreign, very knowing; who would not buy a "genuine Iran" rug? It is pronounced Ear-ran. But the term means merely "Persian." Its general use attests the difficulty of classification.


India. Imperial manufacture. 1600-1580.

But there are certain characteristics of importance which make infallible a classification of genuine Oriental rugs into five main divisions: Turkish rugs, Persian rugs, Baluchistan rugs, Caucasian rugs, and Turkoman rugs, the only Oriental rugs of to-day except the commercial Asia Minor rugs and Indian rugs, the genuine Indian rugs, the genuine Chinese rugs, the nondescripts, and a miscellaneous but infrequent scattering of weaves originating around the perimeter of the principal rug-weaving countries.

But the classification of Oriental rugs is another matter.

The Human Element in Architecture

By Walter W. Cook

Of Lockwood, Greene & Co., Engineers, Architectural Department, Boston.

ARCHITECTURE has been referred to as "Frozen Music." I think that applies to design and ornamentation. To my mind architecture is more human. I feel that all buildings can be classified somewhat as are individuals. The building which expresses the individual use and arrangement best is the better building.

How can we arrive at that result? None of our buildings do so a hundred per cent. It is only by striving continually to approach perfection that it will ever be accomplished. An architect must not be held personally responsible for inability to do this, as the owner or client must be of the same mind if it is to be done. It is the architect's work to try and bring this about. In this age of commercialism dollars and cents play such an important part that idealism is apt to be brushed aside—justly so in a great many cases.

The people themselves have been expressed in the architecture of the past and, to my mind, this will always be the case. In a cosmopolitan country like America it will be a long time before any national style will be developed. Architecture is like a language, and it is as difficult to invent new forms and new designs as it is to invent a new word or to force Esperanto on the world.

In brief, the people of any community must be united to produce a lasting or an individual style such as the Greek simplicity, the strong Roman period, Italian Renaissance and later French and English Renaissance periods.

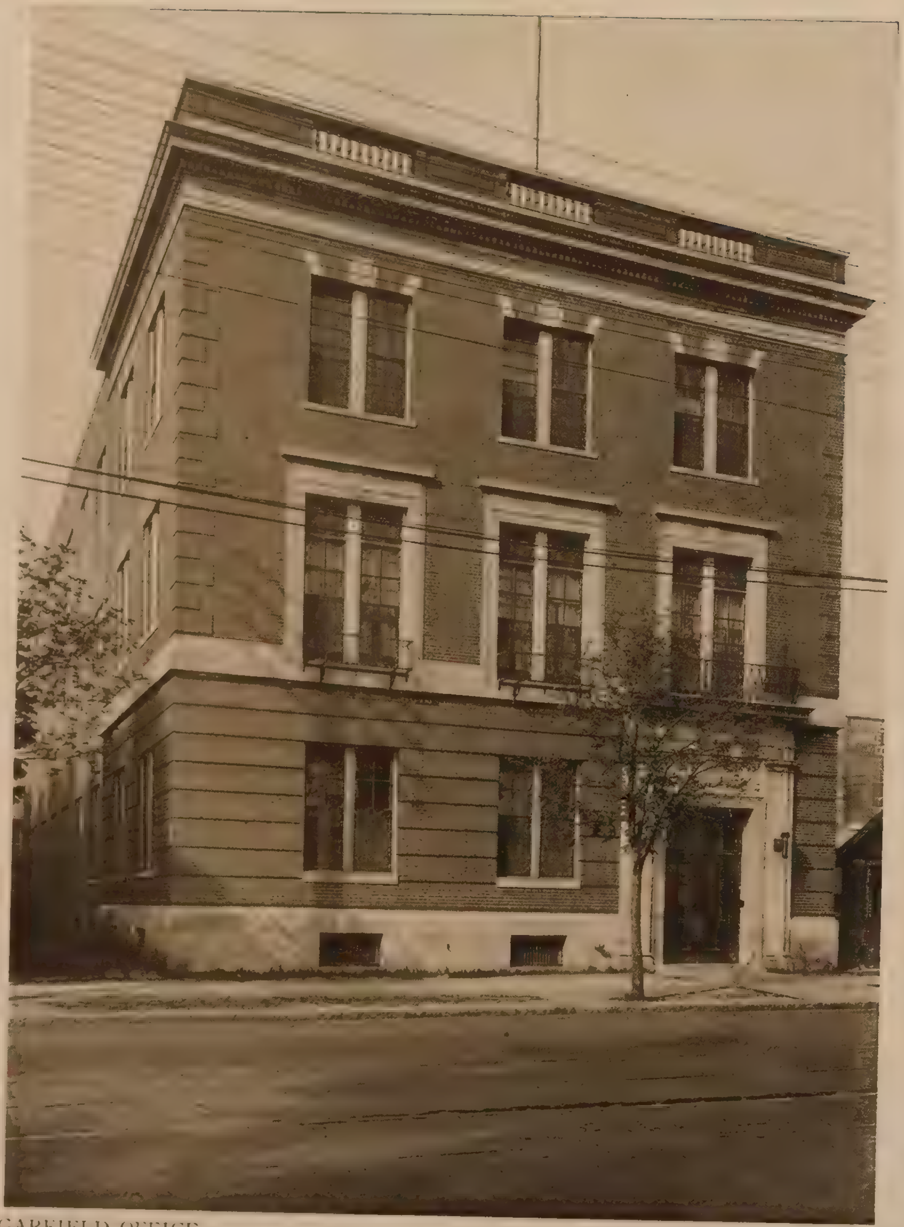
New materials, such as steel and the modern use of reinforced concrete, have developed a new kind of structure but we continue to clothe these structures with the forms and ornaments of earlier periods.

> "In all new work that would look forth
> To more than antiquarian worth,
> Palladio's pediments and bases,
> Or something such, will find their places."
>
> —*Clough.*

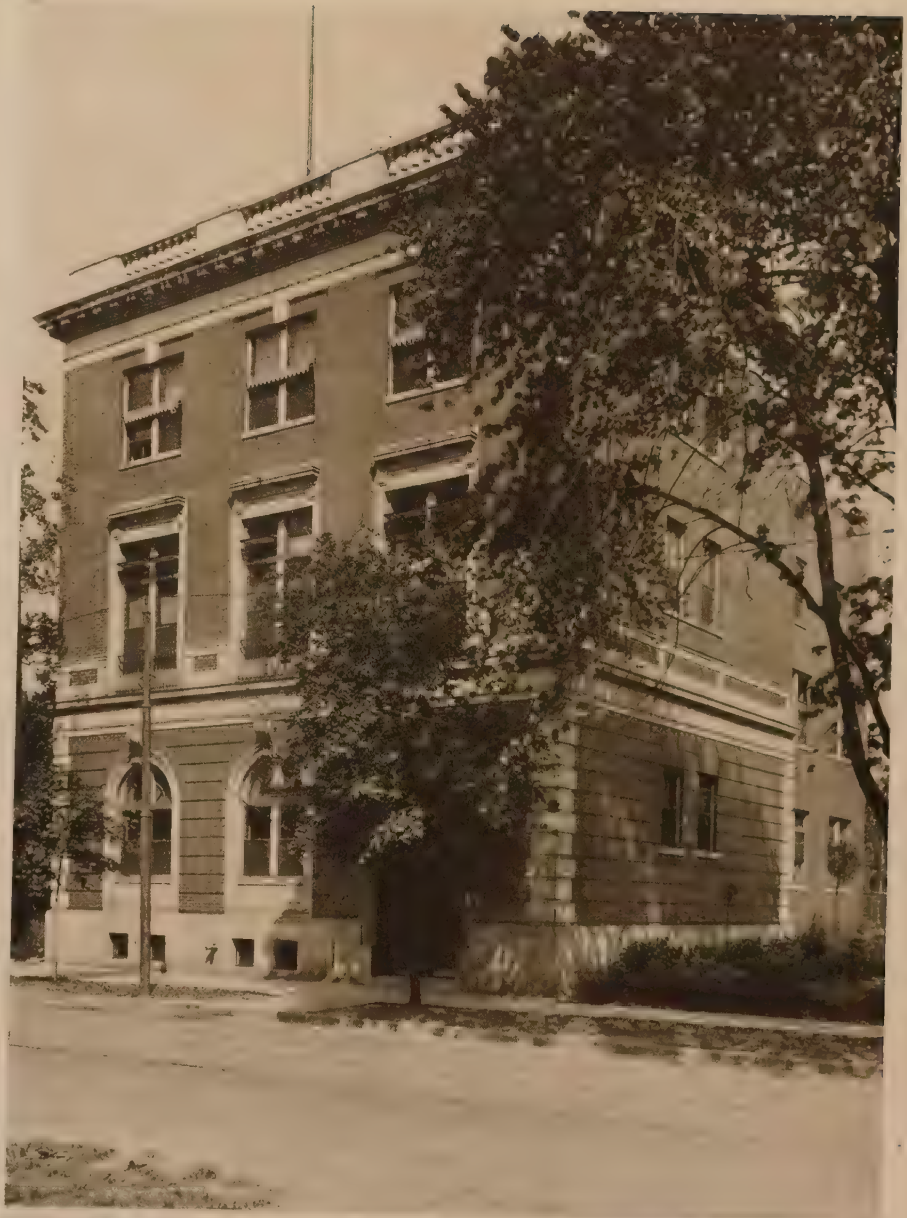
Architects who best adapt the real work of the past to our modern structures will produce the best results, and the forms that are used must express the character and the use of the building to best advantage.

Architects must, to my mind, sit down with the owner and talk dollars and cents at the start and determine what the client is willing to spend for exterior treatment of his building—especially for commercial buildings. At the same sitting Mr. Architect must set forth the facts which are becoming more evident every day, that the proper exterior treatment of any building is worth dollars and cents to a client for advertising value as well as the morale of his business. There is no doubt as to the value to the owner of a good-looking, well-kept manufacturing plant. The architect must obtain effects with the simplest and most economical of treatments that will best express the use of the building. To illustrate: it would be folly to put a Greek-temple front on a power plant.

Excellent results are obtained by the simplest of treatments, combining good proportion with proper scale; but the plan and use of the building comes first, and if this has been studied so that the plant works out to its very best advantage, the elevation will take care of itself and is bound to express outwardly that which is going on within.



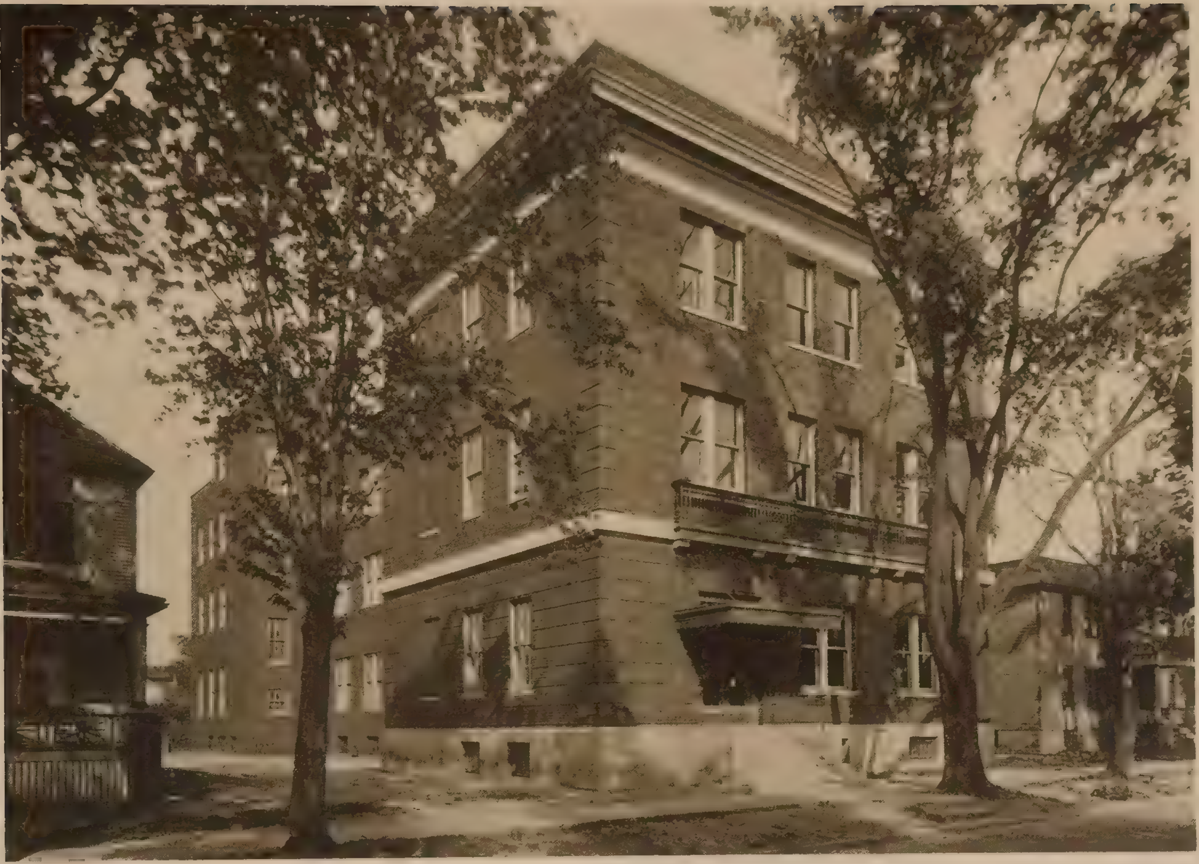
GARFIELD OFFICE.



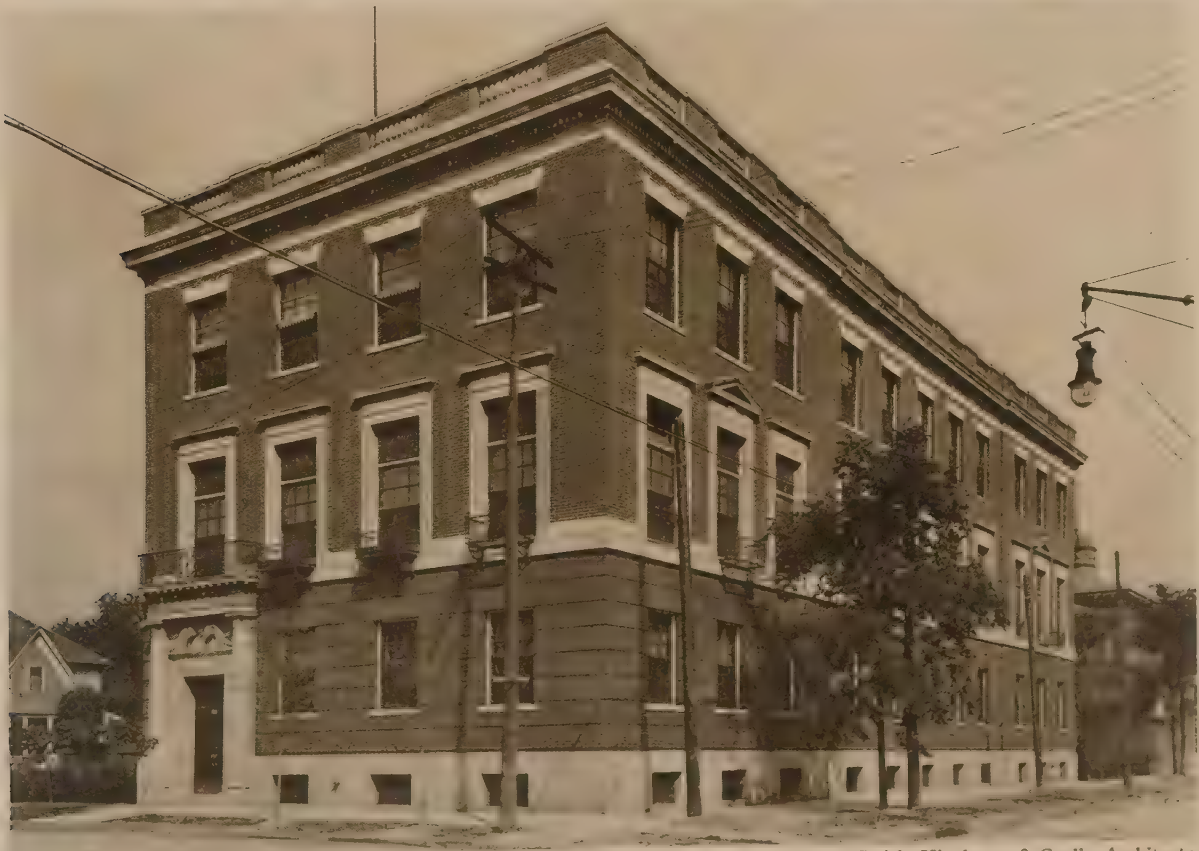
EDGEWOOD OFFICE.

Smith, Hinchman & Grylls, Architects.

BRANCH OFFICES, DETROIT TELEPHONE CO., DETROIT, MICH.



WABASH OFFICE.



LINCOLN OFFICE.

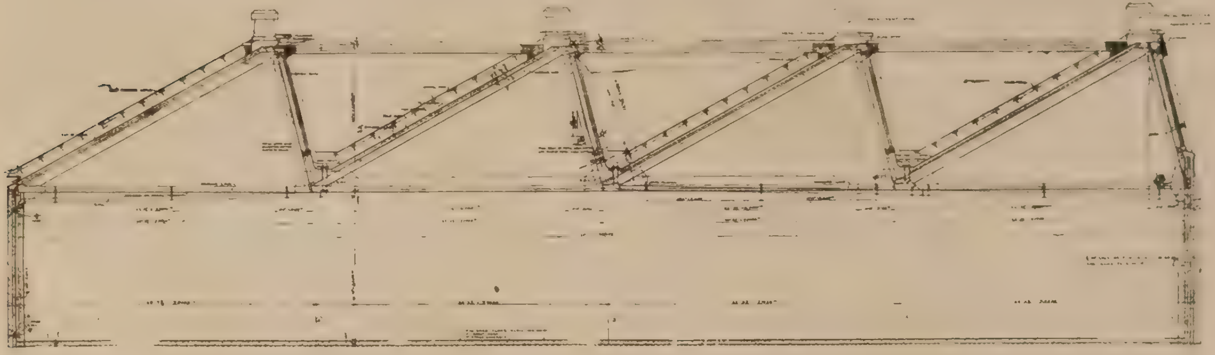
Smith, Hinchman & Grylls, Architects.

BRANCH OFFICES, DETROIT TELEPHONE CO., DETROIT, MICH.

The Super-Span Saw-Tooth Roof Construction

An Improved Form of Saw-Tooth Roof Construction Which Gives Ample Light and Unobstructed Floor Space

By W. Ellis Groben



WITH the increased present-day cost of construction it has become imperative to obtain the maximum area for productive purposes of all types of industrial buildings. The maximum manufacturing area, together with the greatest possible amount of daylight in a given limited space, is the demand made upon architects and engineers by industrial managers.

With this object in view, the Ballinger Company, architects and engineers, Philadelphia and New York, have developed the so-called "super-span saw-tooth" type of construction for buildings of one story, and for the top floor of a building of more than one story, in which every square inch of floor space is made usable in buildings of any desired length and having a width of 100 feet or less.

This is accomplished by using trusses to span the width, thereby avoiding any supporting columns and their consequent shadow spots and cross shadows. With no supporting columns, it then becomes possible to arrange the machinery in the most advantageous manner to suit any particular industrial process.

With the saw-tooth skylight even distribution and uniformity of daylight are obtained throughout the building, regardless of its size. It has been found that skylights give sufficient light for many industrial purposes, no windows being required in side walls. Consequently, the surfaces of these walls are made available for other uses, and in such instances it is entirely possible to erect any number of super-span buildings side by side, thereby securing the maximum use of the property, since no interior courts are needed.

The interior of the Guaranty Silk Corporation's plant at Nanticoke, Pennsylvania, gives an excellent idea of the uninterrupted floor area and its uniform lighting where no windows have been placed in the side walls. The span in this instance is 102 feet and the length of the building 353 feet. In this particular building it has been possible to place 17 per cent more looms than if the old form of construction had been used, involving upright supports.

For buildings more than 100 feet wide and of any length, where a number of super-spans are used side by side, no intermediate masonry walls are required. In their place a supporting column is located only where the super-span trusses meet, so that no supporting columns are needed for units of floor areas of 6,000 to 8,000 square feet.

By a slight modification in the construction the saw-tooth skylights may be placed either lengthwise or crosswise, as required, to face the north light. The bottoms of the trusses may be designed to carry jacquards for weaving, trolley hoists for erecting purposes, motors, blowers, shafting, radiators, and ducts. This location has been found advantageous for radiators, because in localities where cold weather is encountered the heat from the radiators prevents freezing in the gutters.

Those who have had practical experience in the management of textile factories, industrial plants, machine-shops, etc., readily visualize the tremendous advantages of this style of construction for such purposes, as compared with buildings having supporting columns.

Automatic Control of Humidity in Shops

DEVICES for controlling humidity in shops are of three types. The first are makeshifts, such as wet sawdust strewn on the floor, troughs of running water at the sides of the room, or simply an ordinary sprinkling-can. Such crude devices are not in any sense self-regulating, and even with the most careful personal attention produce only haphazard results. The sprinkling-can type of humidifier has been in use for hundreds of years and is of interest chiefly because it shows that the need for air-conditioning apparatus in many industrial plants has been recognized for a long time. A second class of humidifiers includes those that are capable of increasing the moisture in the air up to the point for which they are set, but cannot decrease it. When the weather forces the humidity above the desired point such instruments remain inactive. Few instruments of this type attempt any control of the temperature. A third type of conditioning apparatus is that which is able to hold the atmosphere in a room at a constant temperature and humidity irrespective of outside conditions.

One of the few instruments which absolutely control both the temperature and the humidity of the air is that developed at the Forest Products Laboratory, Madison, Wisconsin. For several years this apparatus has maintained in the laboratory wood-parts storage rooms the typical climatic conditions found in various parts of the United States, ranging from the hot, moist climate of the South to the cold, dry climate found in the mountain regions. The same type of instrument also keeps the wood-working rooms at the laboratory at uniform temperature and humidity year in and year out, with the result that the wooden articles manufactured there give the minimum amount of trouble afterward from warping and checking, and the shop conditions are healthful and comfortable to the highest degree. These instruments have required very little personal attention since they were installed.

The principle upon which the laboratory automatic humidity-control apparatus works is that of cooling the air to the dew-point temperature for the desired atmospheric condition, saturating it with mositure at that point, and then heating it without addition of moisture to the required room temperature. For any given room temperature it is possible to get any humidity desired, simply by choosing the temperature at which the air is saturated.

The apparatus consists of a small cabinet, or chamber, through which the air is drawn as often as it needs to be conditioned. The conditioning chamber contains water sprays whose temperature is kept constant by a mixing-valve. These sprays suck in the air by their own action, cool it to the temperature at which it should be saturated, and give it all the moisture it can hold. As the air leaves the chamber it is heated to room temperature by coils, whose steam supply is controlled by a thermostat located in the outlet. Thus when the air is drawn into the chamber it may be too hot or too cold, too moist or too dry, but the apparatus automatically humidifies or dehumidifies it and brings it to the correct temperature before allowing it to pass again into the room. Both in the storage rooms, where the air needs conditioning very infrequently, and in the workrooms, where it is completely changed every ten minutes, the recording instruments show that the atmospheric conditions have varied to only a slight extent throughout a three-year period.

This method of air conditioning was developed primarily for woodworking shops and wood-gluing, finishing, and drying rooms. It is adaptable, however, to numerous other industrial plants, including textile mills and chemical, foodstuff and tobacco factories, in which close control of atmospheric conditions would be beneficial to both the material being manufactured and the health of the employees. It is practicable wherever there is a supply of cold water and steam heat.

Drawings of the apparatus and further details concerning its installation and operation may be had on application to the Forest Products Laboratory.

Build the New House with Adequate Electrical Outlets

LUXURIES of a few years ago have become necessary equipment in the well-planned home of to-day. The modern home, no matter how small or how modest it may be, is now equipped with many up-to-date features that make it a better place to live in.

Scientific housekeeping is made possible by the use of well-known labor-saving devices, which have been developed so rapidly in the past few years that they have not only come within reach of every home of moderate means but have actually reduced operating costs.

One of the most important points to consider in planning the successful home is adequate electric wiring, with a sufficient number of properly placed outlets.

Good lighting means more than illumination without the aid of a match—carefully selected and well-placed lamps and fixtures make the home more attractive and add greatly to its comfort. Properly located switches eliminate searching in the dark for lights, and a number of extra outlets permit the use of labor-saving appliances without loss of time or disturbing the lighting arrangement.

The vacuum cleaner, electric iron, washing-machine, table appliances, and many other electric household conveniences are now considered as necessary as water or light in the up-to-date home, and, intelligent provision for their use is as essential as modern plumbing.

Vocational Education

THE Fifteenth Annual Convention of the National Society for Vocational Education will be held at Kansas City, Mo., January 5, 6, 7, 1922. This meeting will be attended by representatives from every State in the Union and Canada. At the meeting this year one of the special features will be an exhibition of vocational building plans. At the present time there is wide-spread interest throughout the country in buildings adapted to vocational-education purposes. The exhibition at Kansas City will consist of blueprints of the floor plans and elevations, together with data in regard to cost, type of construction, date of erection, number of pupils the buildings are planned to accommodate, and also photographs showing the principal features of the buildings. This type of work is relatively new in America and to-day there are but few buildings that have been planned specifically for this purpose.

The growth of vocational education in this country has been very rapid during the past three or four years. In 1916 there were only two or three hundred vocational schools in operation in the United States. To-day there are over four thousand schools or departments throughout the country. I am reasonably sure that during the next five years hundreds of buildings will be erected for this purpose, and in addition special provisions for this type of work will be made in a great many regular high-school buildings.

The Emerson Record Shop

W. K. Pleuthner, Architect

Detail.

THE design for the Emerson shop passed through several stages. First: the purely imaginative, which searched the past for a precedent regarding an environment of music, some kind of musical atmosphere which was expressive of a period with some relationship to the present day. The thought presented itself and pictured the old English carol environment, with its informality and spontaneity—a spirit of music. Acting on this there came to mind old plaster, leaded glass, and quaint touches, associated with the early English periods. This spirit, with its robust treatment, also gave possibilities of keeping a slight feeling of out-of-doors in the galleries.

The programme of arrangement in plan and design was as follows:

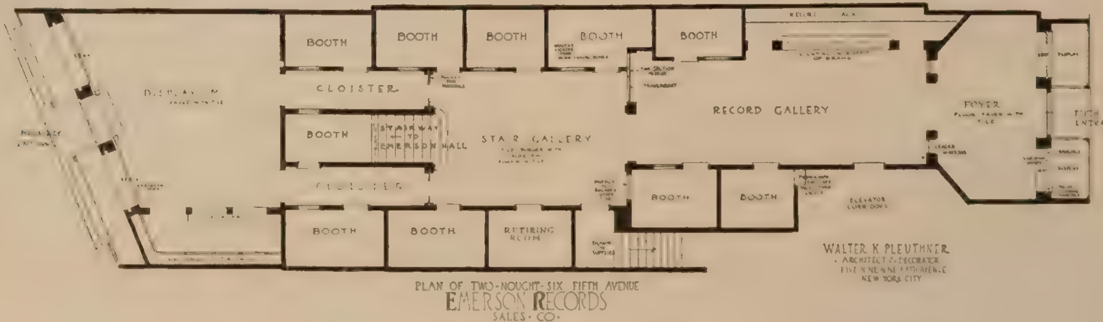
The building was remodelled; first floor narrow, especially at the entrance, with a splayed and irregular side. Great elasticity gave symmetry to the plan. This was secured by a series of rooms which made for better proportion than one or two long, narrow and high. Small floor area necessitated a scheme which would expedite circulation. The three phases of business in this scheme were, first: the active buyer who wished to purchase a record quickly—a quick beat to the measure; second, the prospective purchaser of several records; thirdly, the lingering purchaser of a phonograph and accessories. The time consumed by these three classes was timed, and the facilities of the record stack and booths were arranged to see this through as expeditiously as possible. The stair gallery and display room were treated and placed for a more leisurely sales attitude.

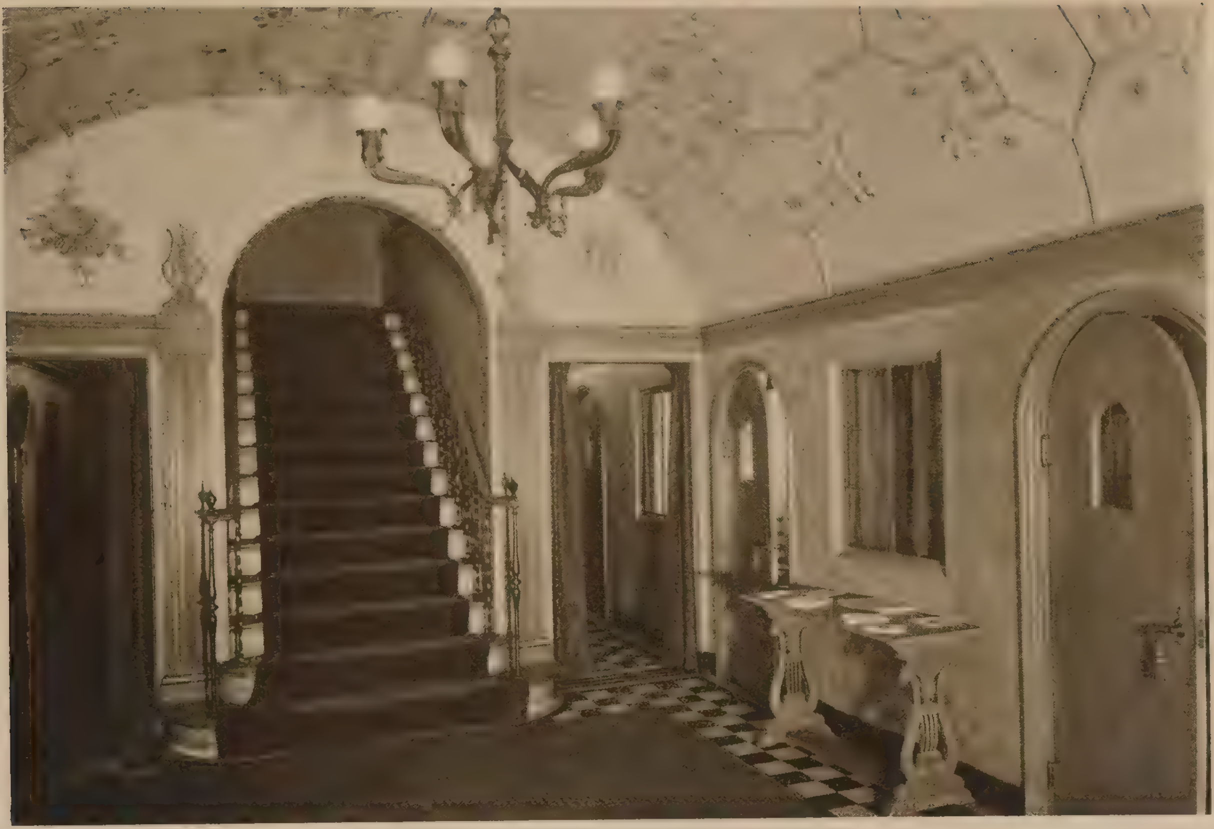
The choice of a scheme of color was dictated by the structure, scale, and artificial lighting necessary in the stair gallery. The stair gallery is the climax of the scheme, from an architectural, picturesque, sales, and color standpoint. The progression of the two galleries to the stairway is the progression one should feel in a series of rooms. There must not be a too sudden transition between the out-of-doors and the intimate place where color, sentiment, and comfort prevail. The foyer having a great deal of natural light, facing the east, can carry comfortably a cool color. The galleries, being small, necessitated a predominating tone which should give them breadth and atmosphere. Atmosphere is another term for tone. Thus the scheme has a melting tonality which is conducive to a musical cadence. A basic undertone was laid on of old ivory. The dark glazing of low-toned purple, a rich amber and a mellow-toned green give one a gamut of color well controlled and in keeping with the architonic melody of the structure. The soffit and ceiling illuminating was determined upon in the foyer gallery and booths because of their miniature size. The free hanging fixtures were also designed by the architect, Mr. Pleuthner, who is a craftsman and painter interested in the actual execution of the material. The escutcheon of the hardware on the doors is adapted from the insignia of the Emerson Company. The leaded glass embodies motifs suggestive of the company's products, while the architect signed his work in lead.

Displayium.

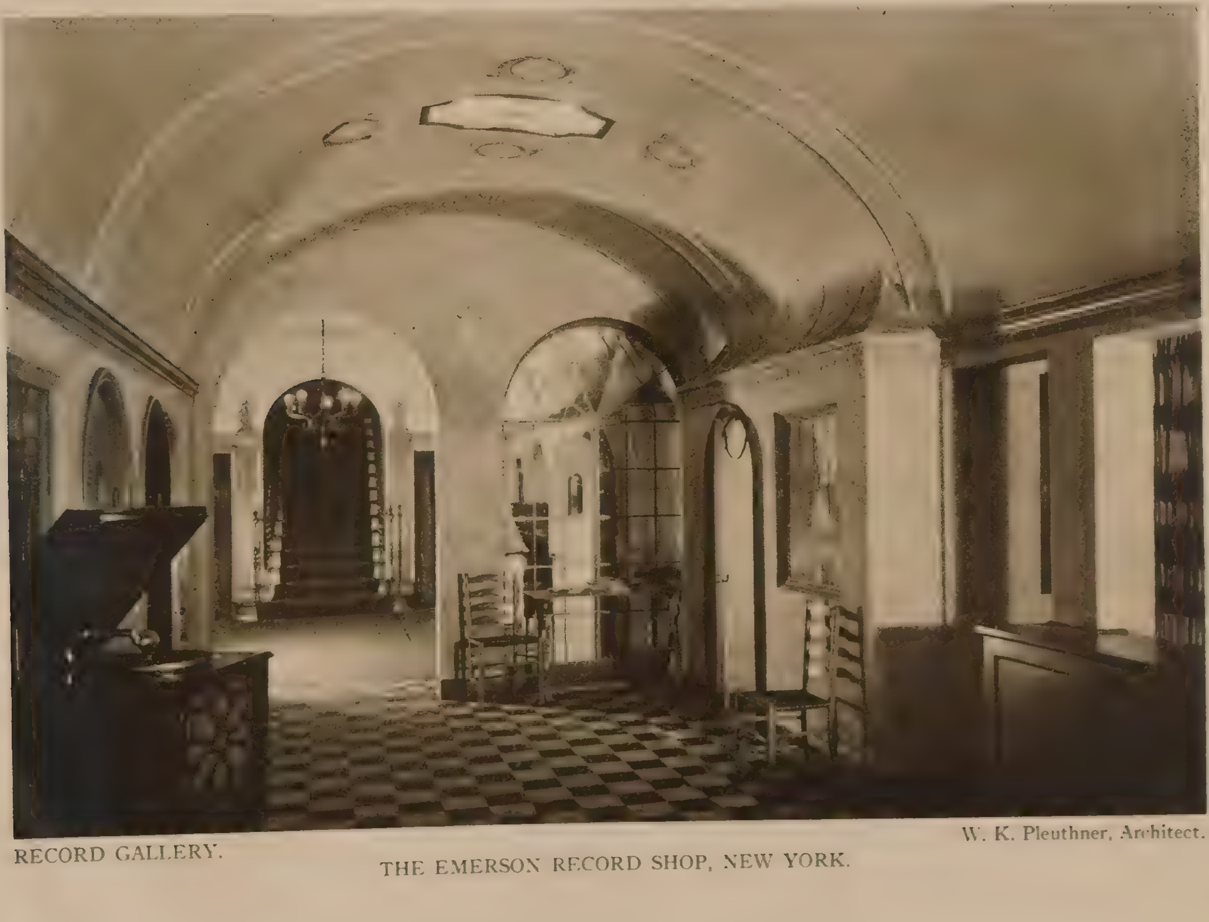
The stairway invites one to Emerson Hall on the second floor, where concerts are contemplated.

The Emerson Record Shop might be termed cosmopolitan in style, American in atmosphere, modern in scope. Having a modern product to sell, therefore, æsthetically it should have a modern environment—material used of a variety that is compatible with the cosmopolitan style.





STAIR GALLERY.



RECORD GALLERY.

W. K. Pleuthner, Architect.

THE EMERSON RECORD SHOP, NEW YORK.

Announcements

The following letter seemed of such interest that we asked the writer's permission to pass it on.

PARIS, FRANCE, September, 1921.

DEAR MR. EDITOR:

This is rather a belated letter in regard to the exhibition by the architects of America, under the auspices of the A. I. A., at the Grand Palace in Paris. There is no doubt that an exhibition of this sort should be had every year, not only in Paris but in London, and God knows they need the uplift which American contemporaneous architecture can give them. It is unfortunate, however, that our exhibition was so hurriedly gotten together. We had no catalogue, and the halls were painted with colonial work from Annapolis, Boston, and other places. This rather surprised the Frenchmen, as they expected to find an exhibition showing what the American architects were doing in the present time. There were no plans shown, and this made it difficult for the Frenchmen to comprehend the photographs. I believe further that if the institution would take this matter up earlier and provide an exhibition of American architecture in exchange for one from Paris as well as one from London, we would all benefit from it. It seems that a greater part of the European architecture of to-day is rather mushy and decadent, whereas most of ours to-day shows itself full of character and purpose.

Jacques Greber, who is laying out Fairmont Park in Philadelphia, had a most wonderful collection of drawings, apparently regardless of expense, for which he received a gold medal.

I am further interested in the method of labelling the arts employed in this exhibition. Formerly we used the expression "architecture, sculpture, and painting," whereas in this case we have "sculpture, painting, and architecture." There seems to be a subtle reason for this which explains itself.

I myself found five thousand names of painters, very nearly as many sculptors, not many French architects, a smaller number than those among the Americans. I believe that if the architects in America would take this matter seriously they might possibly regain their former supremacy.

I am enjoying myself here immensely and expect to remain for a long time.

Very sincerely,

FRANK E. WALLIS.

Mr. A. D. R. Sullivant, formerly associate member of the firm of Hoppin & Koen, and Mr. Frederick M. Godwin wish to announce that they have formed a partnership for the practice of architecture under the name of Godwin & Sullivant, with offices at 350 Madison Avenue, New York.

Elwin P. Norberg, architect, announces the opening of an office for the practice of architecture at 6403 Hollywood Building, Los Angeles, Calif. Manufacturers' samples and catalogues are requested.

Robert L. Harris, architect, announces the removal of his offices from the Calvert Building to 13 West Saratoga Street, Baltimore, where he would be pleased to receive catalogues and literature.

Cram & Ferguson, architects, announce the removal of their offices from 15 Beacon Street to 248 Boylston Street, Boston, Mass., November 1, 1921.

Baker, Smith & Company, who installed the heating and ventilating equipment in the Harkness Memorial Quadrangle at New Haven, Conn., have called our attention to an error in the preparation of their advertisement that appeared in the October issue that credited them with the power-plant.

We regret the error and call attention to this universally known firm's announcement in this number.

Redfield & Fisher, Inc., announces that on October 15, 1921, Mr. George N. Wallace, formerly a director of Hoyt's Service, Inc., in charge of Copy Department, becomes associated with this advertising agency, which will hereafter be known as Redfield, Fisher & Wallace, Inc., 105 West 40th Street, New York.

The New or Conduo-Base Method.—The new or Conduo way of wiring, manufactured by The Dahlstrom Metallic Door Co., Jamestown, N. Y., eliminates both time and trouble.

Why? Briefly, the Conduo-Base carries the wires for the office. When a change is necessary, it only requires taking off the face of the base, selecting the wire required, making a notch in the face for the receptacle, making the connection, and replacing the face.

It is not only quicker, but neater, and is accomplished with less confusion and noise than is required under the old method. It does not leave the unsightly mars on the walls and ceilings, and wires are not strung around the mouldings in the rooms to become fire hazards.

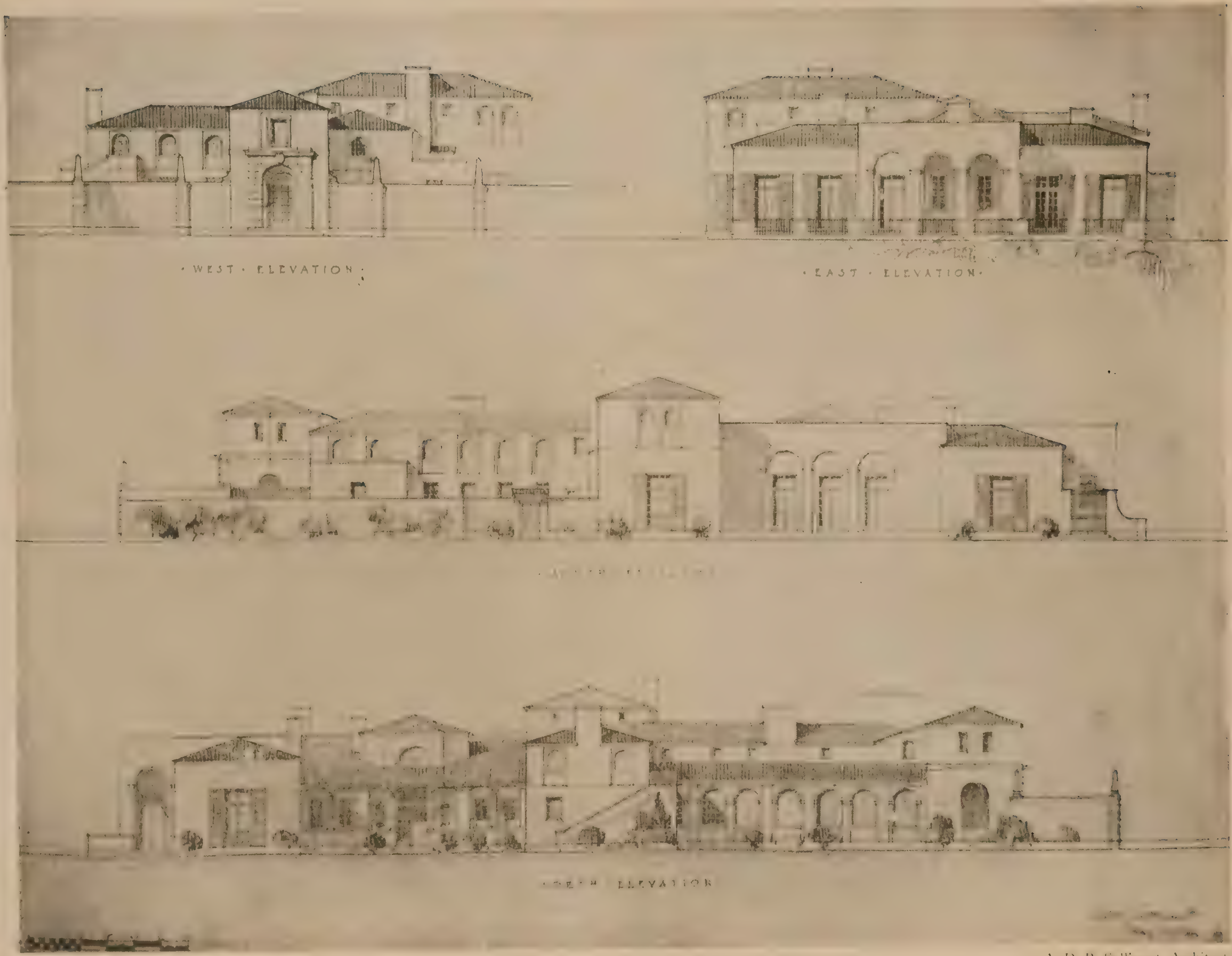
Conduo-Base is metal and thereby provides an additional fire preventive for the building. It is sanitary, and the bronze floor moulding which is provided will not rust or deteriorate. It is furnished in natural bronze, so there is no finish to wear off. The face and other outside members are finished either in plain or stippled colors or grained to perfectly match any wood finish.

It has also been noted that where marble and other mineral substances used for base-boards come in contact with radiator steam and heat, they quickly crack and corrode, leaving unsightly, unsanitary cracks. Conduo-Base, being all metal, overcomes this trouble.

Thomas S. McLaughlin, architect, announces the opening of his new offices in rooms 409 and 410, 72 Weybosset Street, Providence, R. I. He is a member of the American Institute of Architects.

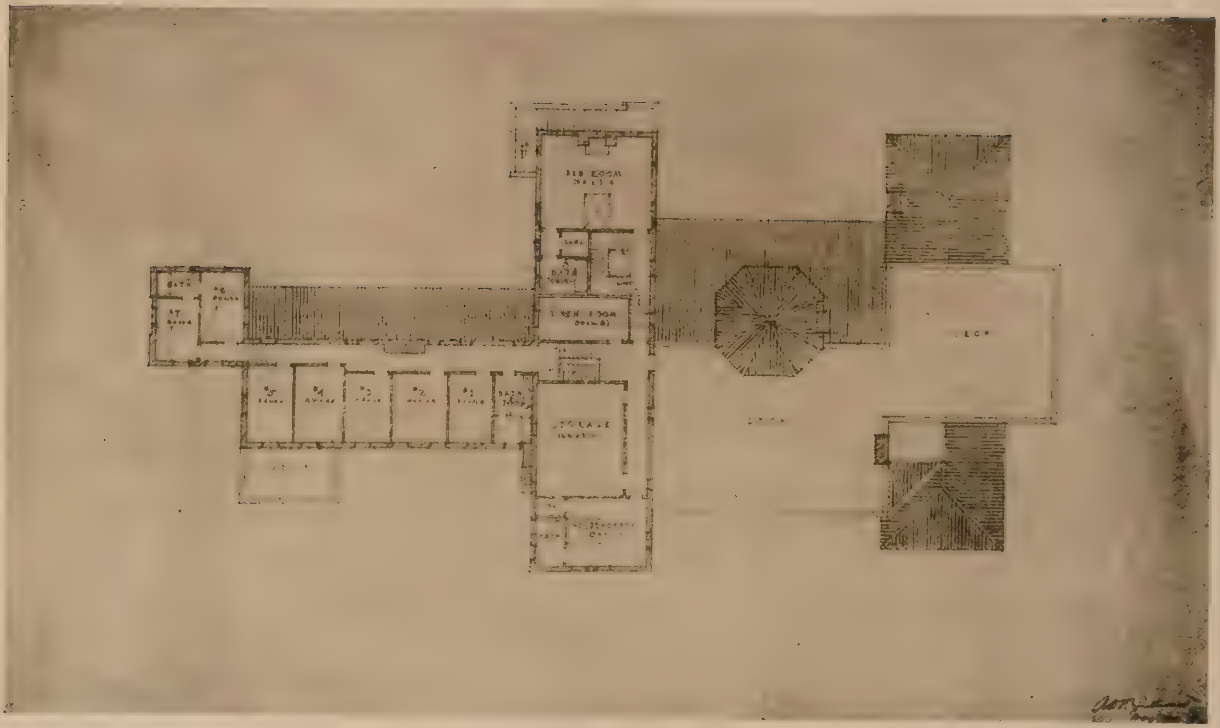
Theodore F. Laist, formerly Major of Engineers, U. S. A., Construction Division, announces that he has resigned as architect, Central District, Bureau of Valuation, Interstate Commerce Commission, to become Chicago representative of the National Lumber Manufacturers' Association, 1613 Harris Trust Building, 111 West Monroe Street, Chicago, October 1, 1921.

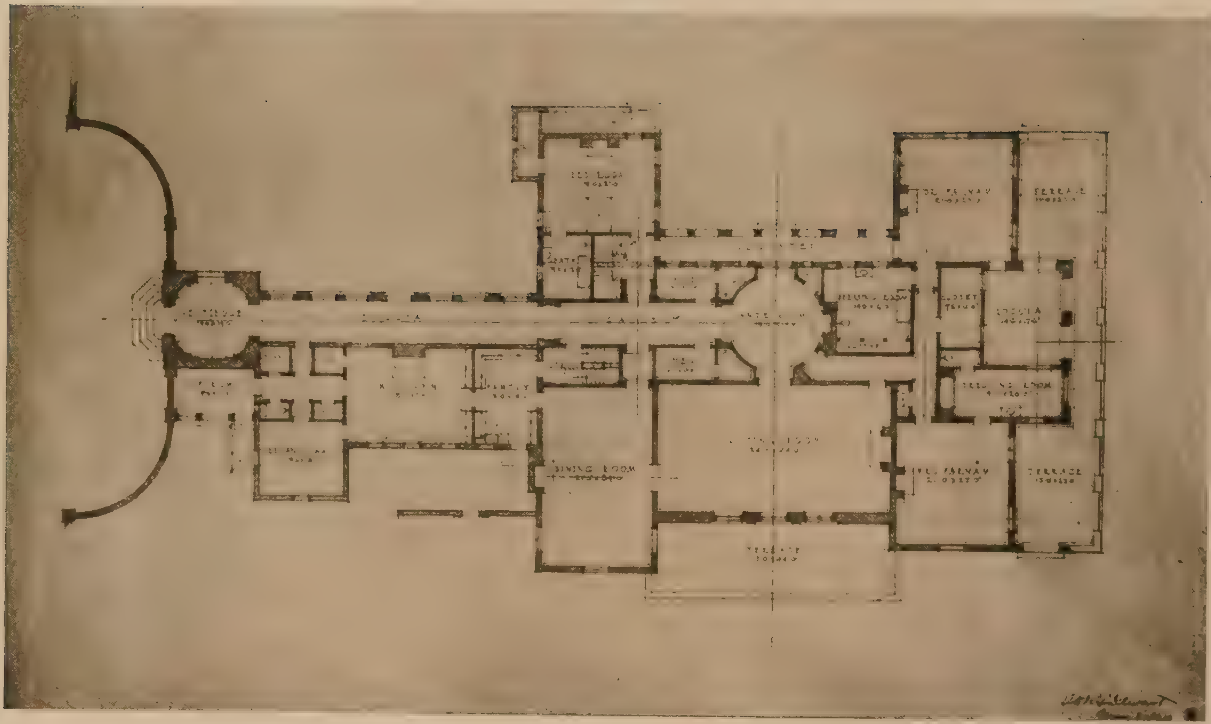
Warren & Clark, architects, have taken temporary quarters at 15–17 West 44th Street, New York, until their new offices are completed.



SKETCHES FOR RESIDENCE IN CALIFORNIA.

A. D. R. Sullivant, Architect.





SKETCHES FOR RESIDENCE IN CALIFORNIA. A. D. R. Sullivant, Architect.

Construction of the Small House

By H. Vandervoort Walsh

Instructor, School of Architecture, Columbia University, New York

Article XIV

SELECTING MATERIALS FROM ADVERTISEMENTS

IN the planning of the construction of the small house, the architect has many problems of selection, such as the choosing of this brand of roofing material from among many makes or the specifying of this type of furnace from among many patterns, and, in fact, the selection of the best type and the best materials which the market affords in all branches of structural and mechanical devices. If he does not specify any one brand, but merely states that the contractor shall use an approved make of paint or an acceptable brand of hydrated lime, he has merely deferred his ultimate choice in the matter to a later date, for in the end he must decide whether the particular make or brand is acceptable, and in order to do this he must know enough about the various makes and brands on the market to judge wisely and in a fair spirit, for the chief motive in back of the contractor's choice will be rather one of money than quality.

The problem, therefore, which confronts the architect in acting as judge of materials and brands as to their quality is very serious and extremely full of pitfalls, and outside of his personal experience and that of his friends, the choice must be made upon the claims of the manufacturers as presented in advertisements. Now, of course, the difficulties which advertising literature presents are the overstatements which are found in them and the suppression of facts which appear to the makers as derogatory of their product. But if the circulars of information and advertising statements are collected for any one type of mechanism or any one type of material or system of construction, it will be found that the truth of the matter will be implanted in the accumulated statements of the various concerns manufacturing these mechanisms or materials. What one manufacturer does not say another will, and very often a rival firm will reveal the defects of its competitor's products by its advertisements. In fact, if you want to find out what is the "nigger in the wood-pile," read the advertisements of a rival manufacturer. Of course it is not good taste in advertising to knock the other fellow's products, but general statements are made which are enough to enlighten the alert reader as to what should be the good points to look for.

For example, suppose the architect knew little or nothing about what should be the good qualities of a hot-air furnace of the pipeless type, but had before him the advertisements of various makers which we will designate as *A*, *B*, *C*, *D*, and *E*, although the quotations which are given are accurately taken from real advertisements of well-known firms, the identity of which we have purposely concealed under the assumed titles of the letters of the alphabet.

Let us pick up advertisement of (*A*) manufacturer, and select what appears to be the important statements which occur in it. We read: "The grate is slightly cone-shaped, which breaks up all clinkers and makes the fuel roll toward the wall of the fire-pot, where air is mixed with the gas. This generates a much greater degree of heat than it is possible to obtain with the old duplex and flat grates, and clinkers that would form and be wasted in other furnaces are thereby consumed." From this the architect has learned to consider the question of the grate, and certainly he has definitely found out what is the disadvantage of the furnaces which use the old duplex or flat grates. It ought to be his aim to ask the manufacturer of furnaces using these types of grates what they have to say in defense of this indictment.

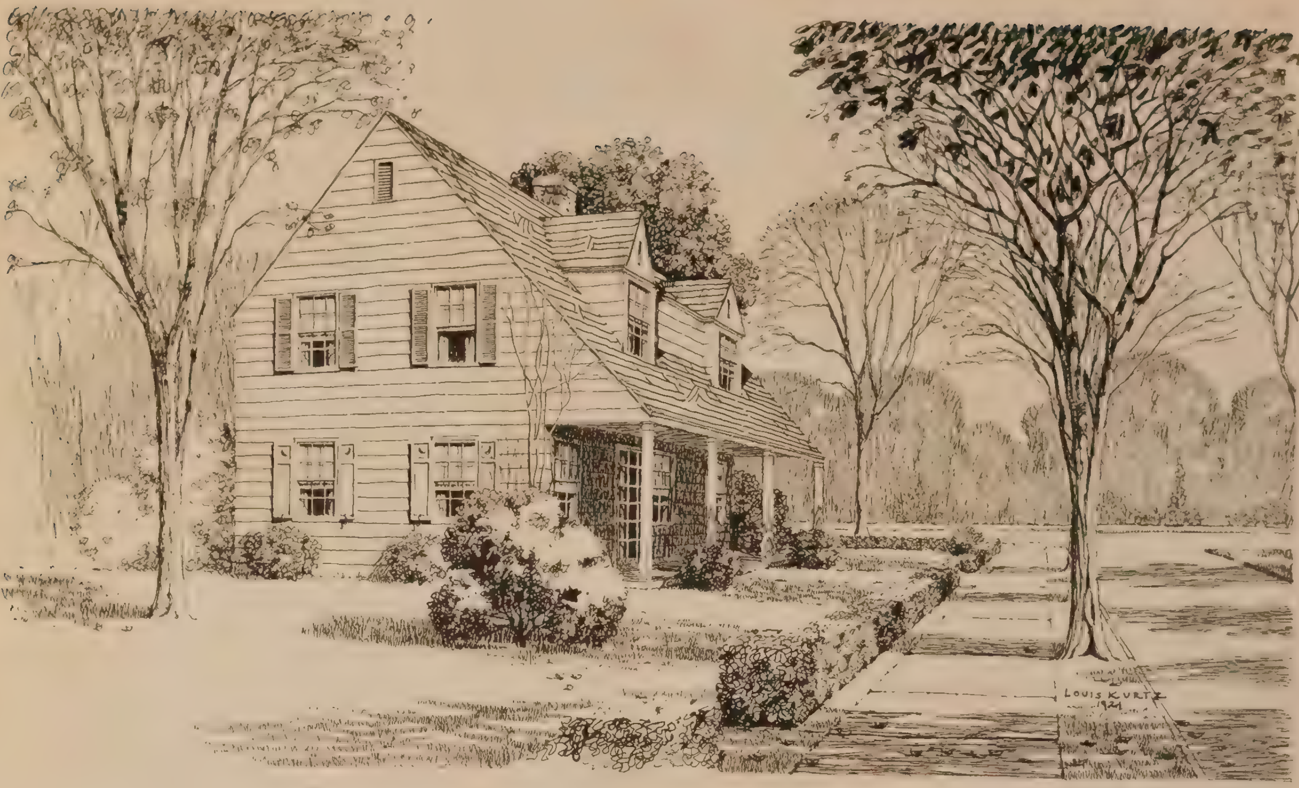
But let us continue to read: "The ash-pit is large and roomy on the inside, and is provided with a very large door, which makes it convenient for the removal of ashes." It is evident from this that there are furnaces on the market which have this defect of too small an ash-pit and door. The architect can then mentally pigeonhole this as a point to be considered in examining a furnace.

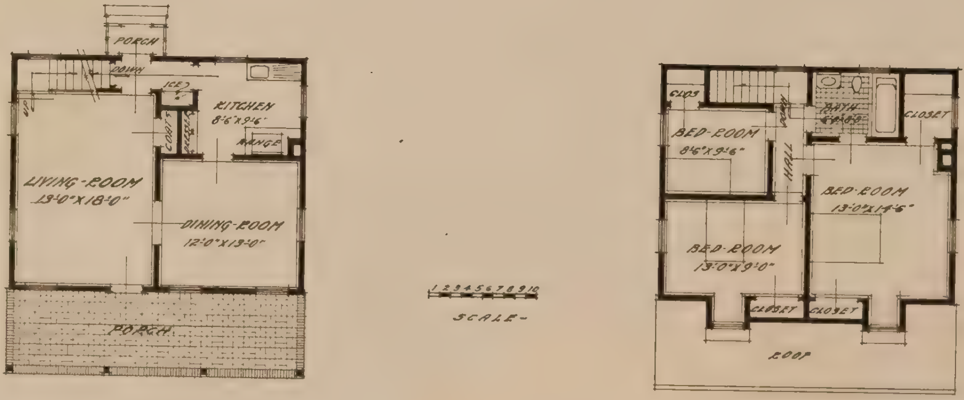
Continuing our reading we come across this statement: "The (*A*) radiator is cast in one piece, with no joints to be cemented or bolted together." This is evidently a reflection upon the weaknesses of other makes which have radiators that are bolted and cemented together, and on investigation we soon learn that furnaces often have leaky radiators which permit the coal-gas to escape into the warm air delivered through the house. Here is a definite defect to be remembered.

Suppose we turn now to advertisement (*B*), and here we read the following: "Insulating air-chamber acts as a positive division between the bodies of warm and return air." This is certainly a hint of a possible defect in a furnace. Perhaps not all of the furnaces are adequately insulated at this division between the bodies of returning cold air and the outgoing warm air, with the resulting loss of efficiency and sluggishness of circulation.

Reading on in the same advertisement we find the fol-

(*Continued on page* 390.)





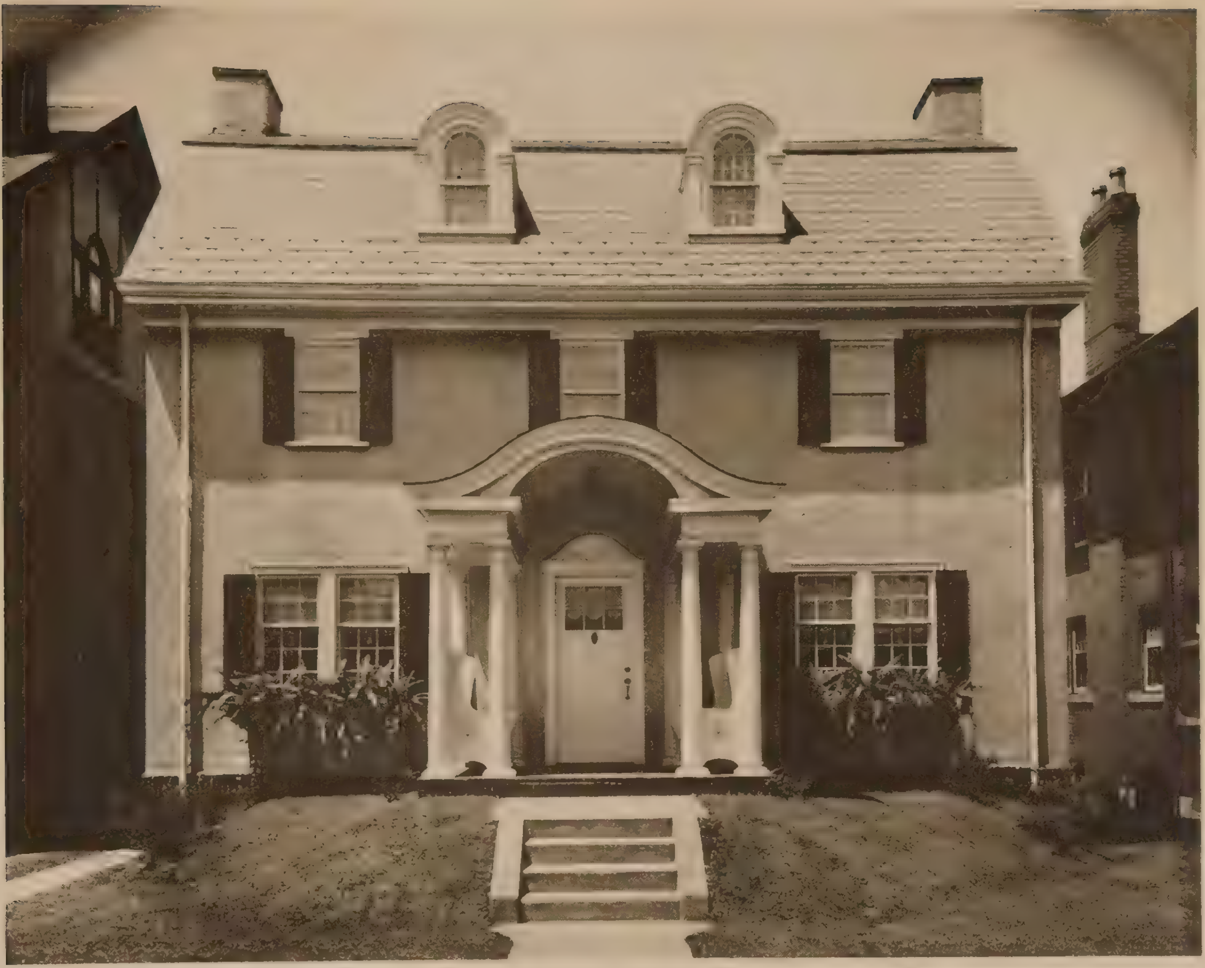
FIRST-FLOOR

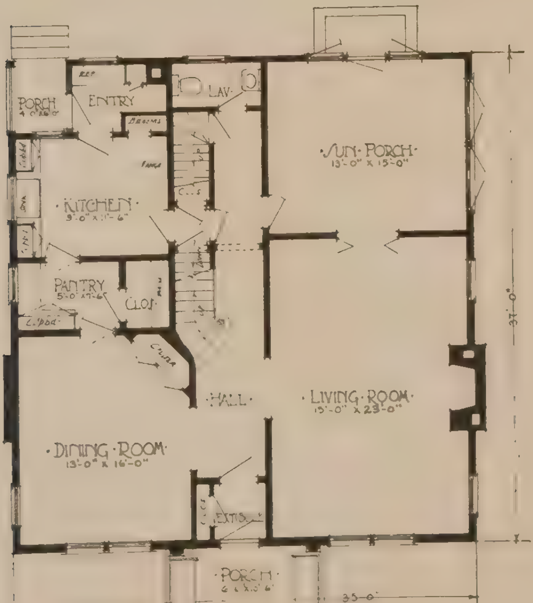
SECOND-FLOOR

PLANS-OF-HOUSE-AT-ST-ALBANS-PARK-LONG-ISLAND-N.Y.

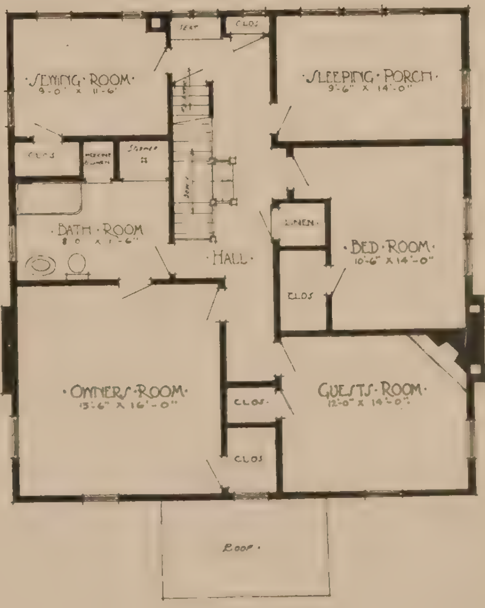
ADOLPH-WITSCHARD-ARCHITECT

56-WEST-45-STREET-NEW-YORK-CITY-





· FIRST · FLOOR · PLAN ·



· SECOND · FLOOR · PLAN ·

HOUSE AND PLANS, M. J. STRAUSS, ERIE, PA.

G. Wesley Stickle, Architect.

(*Continued from page* 387.)

lowing: "The (*B*) smoke-plate is an added precaution against the leakage of smoke and gas." Evidently there is some possibility of smoke leaking into the warm air, or else this device would not have been suggested, and probably there are some furnaces where this is a very serious objection.

Turning to the next advertisement, (*C*), we read: "Only the best grade of iron goes into the casting." This is another consideration; for evidently, from the following, certain types of furnaces do not use the best castings, and give trouble. "Break-downs and imperfections are reduced to a minimum. The endless series of treatments and repairs is never required."

A further reading tells us that "the humidifier is ample capacity," which statement suggests the possibility that not all humidifiers are large enough.

But look what advertisement (*D*) informs us: "No heat lost by being radiated through casing into cellar." This is certainly an interesting point to consider. And reading on we learn: "Long fire-travel in radiator insures a cool smoke-pipe and there is no fuel wasted." This is surely a matter of design that ought to be observed in good furnaces.

Still another fact is brought to light by "Fire-pot—one piece, heavy-ribbed for purposes of increasing its radiating surface and to give it greater power of resistance against expansive force of the fire."

But here is something none of the other advertisements have told us: "Steel radiators are preferable for the use of hard coal; cast-iron radiators for soft or hard coal or wood." Also: "Radiators can be turned in either direction, thereby permitting smoke-pipe to be connected with chimney from the most advantageous point."

Finally, when we read in advertisement (*E*) the following, "Grate-bars are quickly removed and replaced. No bolts used," we wonder whether other furnaces use bolts, and whether there is a real objection to them.

Taking the information given in these advertisements, we can now make the following list of points to be considered in selecting any one make:

1. Is the grate so designed that clinkers will not form and not be wasted?
2. Are the grate-bars easily removable?
3. Is the ash-pit large and roomy and is the door amply large?
4. Is the radiator in one piece or so well fastened that it is gas-tight?
5. Is the radiator steel or a high grade of cast iron?
6. Is the inner casing so well insulated that it prevents premature heating of the descending air-currents?
7. What protection is there to prevent the chance passage of smoke into the warm air-chamber?
8. Is the outer casing properly insulated to prevent the waste of heat into the cellar?
9. Is the humidifier of ample capacity?
10. How is the fire-pot designed to increase the efficiency of its radiating surface and how is it strengthened against the expansive force of the fire?
11. Is there a long enough passage for fire-travel, so that no waste of heat is lost up the chimney?
12. Is the radiator flexible enough to permit of the connection of the smoke-pipe from the most advantageous point?

Most certainly this is an array of matters to be considered in the selection of a furnace which no one, except an expert, would think of, but they are all drawn from the advertisements, and this process of study is open to any one who is interested in learning the technical difficulties involved in the selection of this particular mechanical device. Perhaps not all of the knowledge gained is scientific, but at least they are stimulating bits of information that should be investigated.

Let us take one more example of this amusing game of comparing advertisements as applied to roofing materials. Here we will find many conflicting statements, but out of the whole battle of words we can glean some interesting truths.

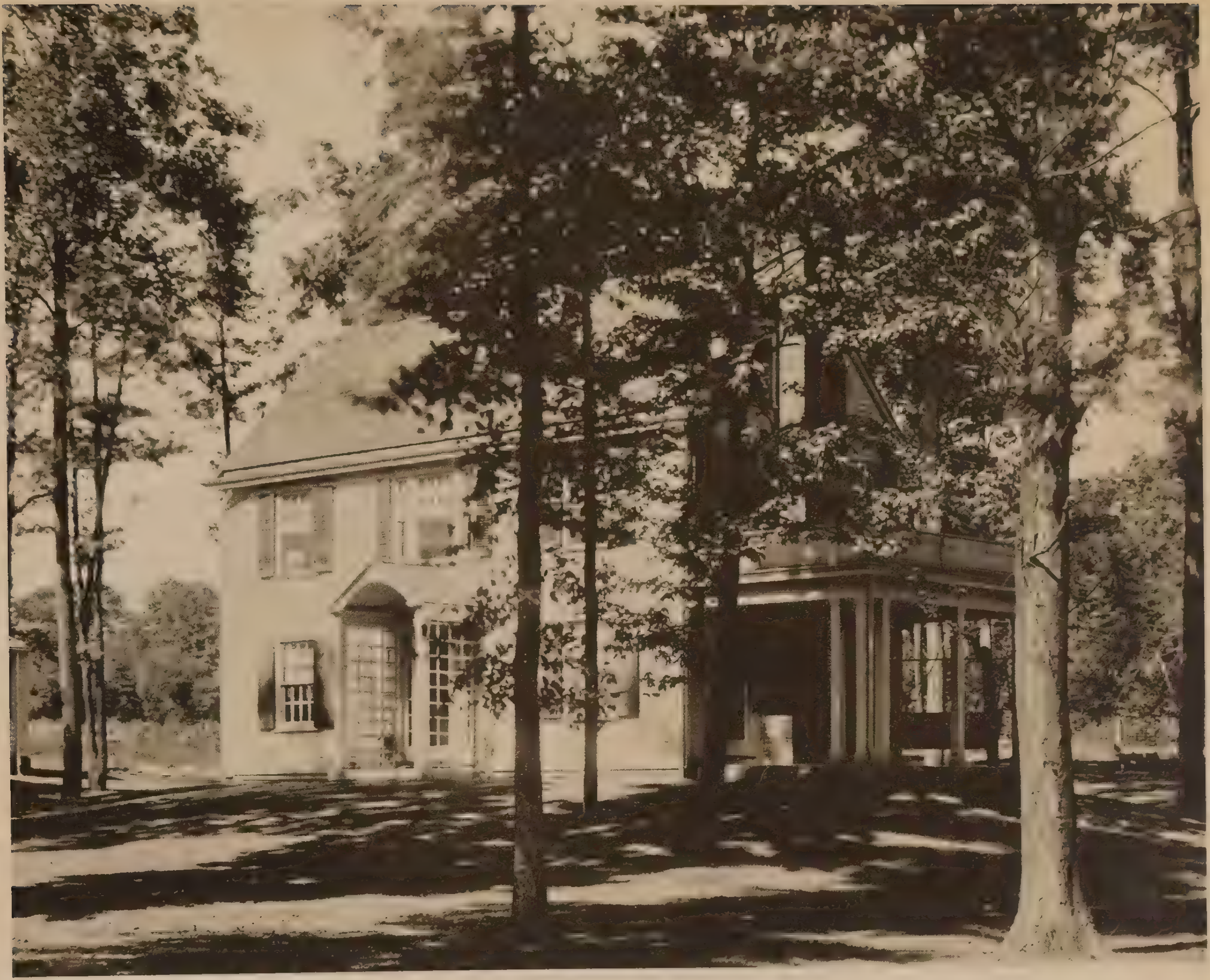
Turn to advertisement (*A*) and we read the following: "Nearly every objection to wood shingles as a roof-covering is applicable to slates, which have still other adverse features. Slates are not fireproof. Ask the underwriter how the insurance companies regard them, and especially how, in comparison with clay tiles, they are not permanent, though more so than wood shingles. . . . Slates attract lightning, and while the sun warps shingles and the wind rips them off, slates are easily broken, and if there is even a slight settlement or vibration, repairs are necessary. Moisture gets under them, and during the winter months especially causes them to lift up and break off. When the ice thaws, the broken pieces slide out, leaving a defective place in the roof. This will happen every winter with a slate roof, and to keep such a roof in perfect condition it must be gone over each spring and the broken slates replaced with new ones."

Turning to advertisement (*B*) for asbestos shingles we read a different point of view: "Unfortunately, however, slate, particularly that which is obtainable on the market at present, does not last much longer than *clay tile* or tin shingles."

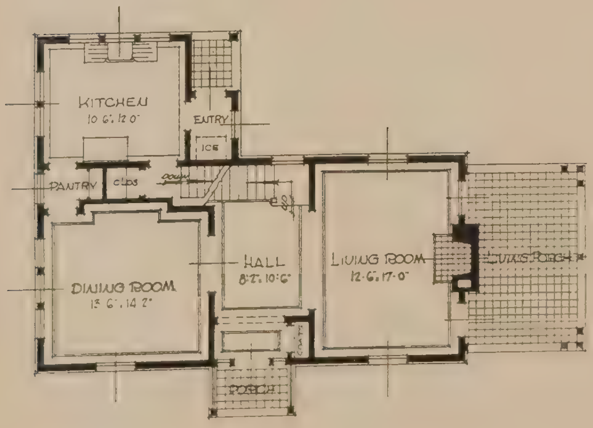
But reading from advertisement (*C*) we are amused at the following: "Slate being solid rock, they simply cannot wear out. They cannot rust, decay, crack, tear, warp, shrink, disintegrate, melt, burn, or smoulder. They will not contract or expand under the influence of heat or cold. They never need painting. They will not attract lightning—nor will they permit the growth of moss or decaying vegetable matter. . . . One of the most important advantages is from the insurance standpoint. Many roofs (not alone wooden shingles) are highly inflammable; but a slate roof will not ignite from sparks from fire in an adjacent building, from passing locomotives, or from any other cause. This fact is so well recognized that insurance companies allow a very substantial reduction in rates on slate-roofed buildings."

The contradictory statements here are very amusing, but the truth can be seen between the lines, that the makers of clay tile really believe that slate is their real rival, and have searched very hard to pick flaws in it as a material for roofing. And when the advertisement of the asbestos-shingle manufacturer is read, we learn that slate does not last much longer than clay tile. But both are insistent upon the opinion of the fire underwriters, and for this reason we naturally turn to see what they have to say, and we find that both slate and tile are under Class A roofing materials, with little difference made between them. As for the point of attracting lightning, why is slate used for switchboards if it is as good a conductor of electricity as a statement of the above type would imply? It is quite evident that one's opinion of slate after all this controversy will be about on a par with one's opinion of clay tile, and that one will realize that poor grades of either slate or tile, or poor workmanship, are rather more the causes of failure than the material itself.

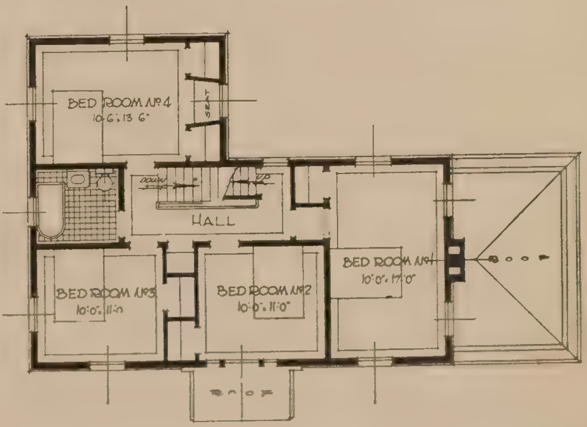
Many more examples might be given of this interesting method of learning the truth from advertisements, but the principle in all cases remains the same, so that further quotations would only amuse rather than instruct.



GENERAL EXTERIOR.



FIRST FLOOR PLAN



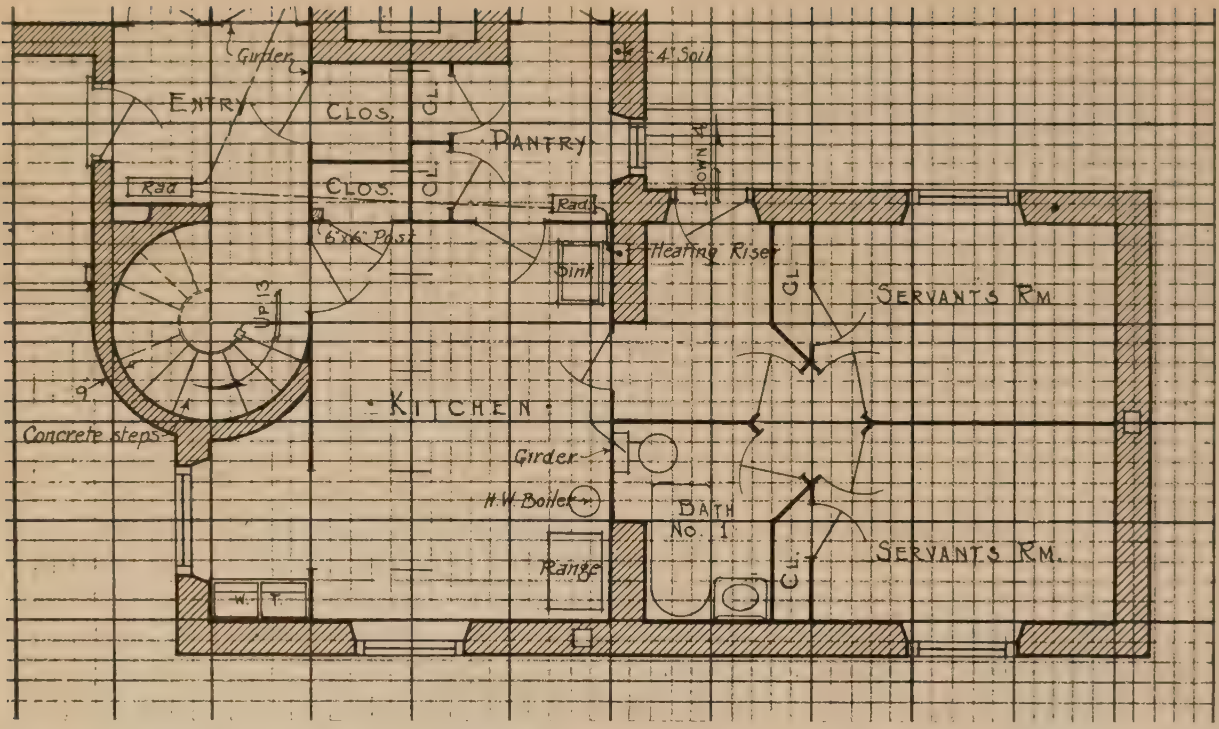
SECOND FLOOR PLAN

BED ROOM AND BATH
ON THIRD FLOOR

HOUSE AND PLANS.

W. LAUD-BROWN, TENAFLY, N. J.

R. C. Hunter & Bro., Architects.



Owing to difficulties in the way of reproduction, the working drawings which accompanied Mr. Flagg's article on "Design by the Use of a Module" in our October issue were somewhat confusing, the various lines not having registered properly. In order to explain more clearly what was intended, a section of one of the plans is herewith reproduced in full size.

Interfloor Transportation

THE D'Humy Motoramp System is offered as a solution of the problem of interfloor transportation as possessing marked advantages over the usual type of ramp, and being superior in many ways to elevator installations. It may be used in factory buildings of all sorts, and also in automobile and motor-truck sales and service buildings and garages. It is almost as compact and economical of space as an elevator installation, but affords all the advantages of a ramp construction.

The notable features of the D'Humy System are obtained by the use of a staggered floor building in which the structure is divided into two vertical sections, the floors in one section being placed half-way between the floors in the other section. Because of this modification the ramps rise a half story at a time instead of a full story. This in itself is an important advantage because it reduces the ramp length by one-half, and consequently the location of ramps in any building is a much more simple problem than where full-length ramps are employed. The ordinary ramp is so bulky that it is invariably difficult to place it so that it does not interfere in some way with the best building layout. The short ramps employed by the D'Humy System, however, remove this difficulty. The location of D'Humy ramps offers no more of a problem than the location of a single elevator.

From the Portland Cement Association we have received the folder showing a number of "Concrete Schoolhouses." Fire protection in school-buildings needs no argument, and yet there are thousands of such buildings throughout the country that are a daily menace to the children who attend them.

Announcements

The "Temperature Regulator Chart or Engineering Data Sheet," sent in by The Fulton Company, Knoxville, Tenn., is something that every engineer and architect has wished for at one time or another.

In figuring the proper size tank regulator nearly every one is inclined to figure too high, but if guided in your selection of the Sylphon temperature regulators by this chart, they should give perfect satisfaction.

Too large a regulator not only adds expense but results in merely "cracking" the valve, which produces wire-drawing action with obvious results. Our experience has shown that 90 per cent of all trouble jobs were caused by regulators larger than necessary, or in failing to have the balanced valves ground for the correct pressure. We grind our Sylphon temperature regulator valves for the pressure to be used on each particular installation.

The chart shows a column of *Absolute Pressures*, and also one of *Gauge Pressures*. They call attention to this lest some confusion may arise regarding the two columns.

The company invites, and will much appreciate, comments on the chart. Copies will be sent upon request.

The American Ventilating Co., Pittsburgh, have sent us their valuable catalogue of the American-Carson Suction Ventilators, installed in many important buildings throughout the United States, among them the great Pennsylvania Railroad Station in New York. The many illustrations show the details of construction and the principle of their operation.

We have received the attractive and interesting pamphlets of the Oak Flooring Manufacturers Association, Ashland Block, Chicago.

William H. McKay, 179 West Rock Avenue, New Haven, Conn., announces his removal from New York to the above address. Manufacturers' catalogues and samples are requested.

The Thermal Appliance Company, Inc., of New York, manufacturers of industrial and domestic water-heaters, has just issued a very interesting little booklet entitled "Hot Water Comforts in the Home," showing the many advantages to be found in their domestic "Taco" water-heater.

The booklet will interest all architects and builders. It is attractively printed in two colors, replete with illustrations and diagrams, featuring their domestic water-heater, known as the "Taco."

The offices of Will Levy, architect, are now in the Dolph Building, northeast corner of 7th and Locust Streets, St. Louis, Mo.

We have received a handsomely printed brochure illustrating some of the buildings designed in recent years by T. Beverly Keim, Jr., architect and engineer, of Los Angeles, Cal.

"The Code at a Glance. Alphabetical Tabulation of the Requirements of the National Electrical Code, with a Handy Glossary Defining Words and Terms that Are Often Misinterpreted." By Hulbert S. Wynkoop, M.E. In charge of Electrical Inspection, city of New York. Published by the National Association of Electrical Contractors and Dealers, 15 West 37th Street, New York.

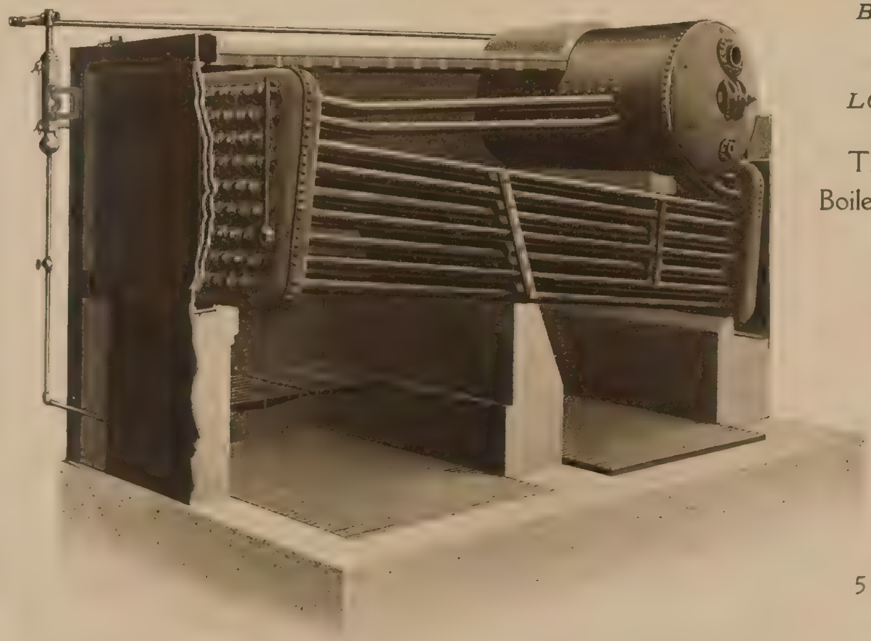
Every architect will be glad to have a copy of the "General Catalogue of Gould Quality Woodwork," with illustrations of their varied products. It includes the universal price list of sash, doors, and blinds, revised official standard moulding list and complete line of woodwork, standardized designs. Gould Manufacturing Company, Oshkosh, Wis.

"The Portfolio of Architectural Details in Brickwork," issued by the American Face Brick Association, Chicago, includes many admirable examples by well-known architects. The plates are made from excellent photographs and are handsomely printed.

We have received from The Associated Tile Manufacturers "Documents Relating to Specification for Tile Work, Work Sheets for Specification Writers, and Basic Specification for Tile Work and Related Documents."

The handbook of the Truscon Steel Company, "Truscon Steel Sash," can be had for the asking. Its eighty pages contain standard dimension tables, architectural details, specifications, and more than twenty pages of illustrations. Engineers, architects, and contractors who received advance copies for criticism declare it to be the most practical and handy reference book ever printed on steel windows. It is published by the Truscon Steel Company, Detroit, Mich.

GEARY WATER TUBE BOILER
CROSS DRUM TYPE



BUILT IN ALL SIZES

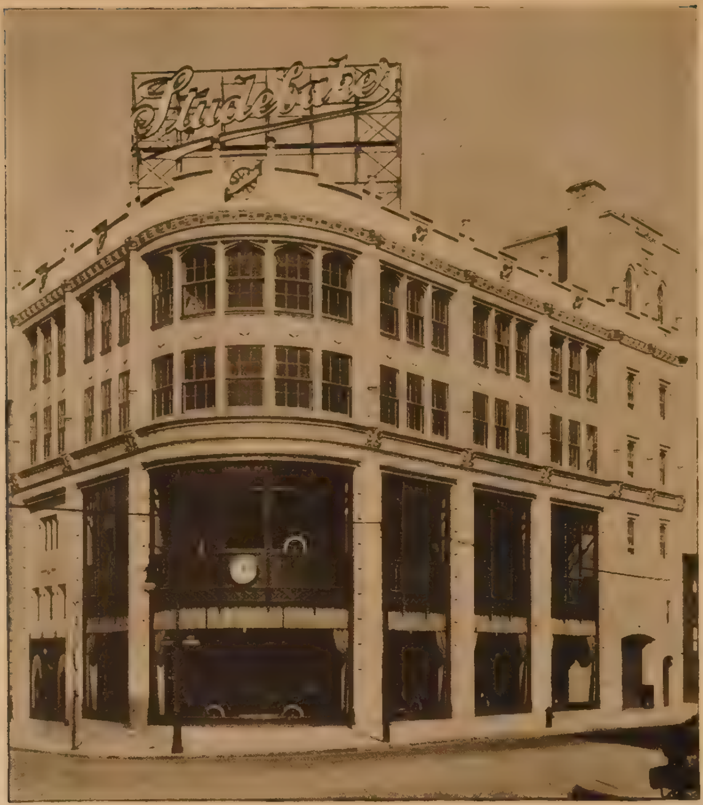
ALSO MADE WITH
LONGITUDINAL DRUM

This is a cross section of the Boilers installed in the

GLOBE INDEMNITY
COMPANY BUILDING
AT NEWARK, N. J.

MADE BY THE
OIL CITY BOILER
WORKS
OIL CITY, PA.

Eastern District Sales Office:
501 FIFTH AVENUE
NEW YORK CITY
H. O. DILL, Manager



Atlantic Terra Cotta, always desirable for the exterior elevations of a building, is a practical necessity when the design calls for modeled detail in color.

The walls of the building illustrated are Atlantic Terra Cotta, conglomerate in color. The Studebaker trade-marks, and the sign over the right elevation, are white Terra Cotta against black.

Architectural flexibility, expressed in little details of this kind, is characteristic of Atlantic Terra Cotta.

Studebaker Building, Brooklyn, N. Y.
Tooker & Marsh, Architects
Moody Construction Co., Builders

Copyright

Atlantic Terra Cotta Company
350 Madison Avenue, New York

Southern Factory:

Atlanta Terra Cotta Company
Atlanta, Georgia